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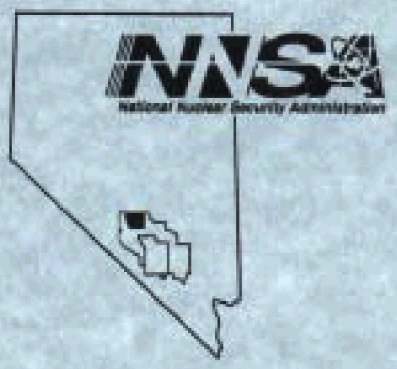

Closure Report for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range, Nevada

UNCONTROLLED

Controlled Copy No.:____

Revision: 0

February 2003

Environmental Restoration
Division

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office

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CLOSURE REPORT
FOR CORRECTIVE ACTION UNIT 425:
AREA 9 MAIN LAKE CONSTRUCTION DEBRIS DISPOSAL AREA,
TONOPAH TEST RANGE, NEVADA

Prepared for:
U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
Work Performed Under Contract No. DE-AC08-96NV11718

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CLOSURE REPORT
FOR CORRECTIVE ACTION UNIT 425:
AREA 9 MAIN LAKE CONSTRUCTION DEBRIS DISPOSAL AREA,
TONOPAH TEST RANGE, NEVADA

Approved by: Kevin Cabble for Date: 1-30-03

Janet Appenzeller-Wing, Project Manager
Industrial Sites Project

Approved by: Janet Appenzeller-Wing Date: 1/30/03

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ACRONYMS AND ABBREVIATIONS

BN	Bechtel Nevada
CAS	Corrective Action Site
CAU	Corrective Action Unit
COPC	Contaminant of Potential Concern
CR	Closure Report
DOE	U.S. Department of Energy
DOE/NV	U.S. Department of Energy, Nevada Operations Office
DU	Depleted Uranium
DQO	Data Quality Objectives
ft	foot(feet)
ft^3	cubic feet
FFACO	Federal Facility Agreement and Consent Order
gal	gallon(s)
L	Liter(s)
LLW	Low Level Waste
m	meter(s)
m^3	cubic meter(s)
NDEP	Nevada Division of Environmental Protection
NNSA	U.S. Department of Energy, National Nuclear Security Administration
NTS	Nevada Test Site
RCT	Radiological Control Technician
ROTC	Record of Technical Change
RMA	Radiological Materials Area
RWP	Radiological Work Permit
SAFER	Streamlined Approach for Environmental Restoration
TL	Technical Lead
TTR	Tonopah Test Range
USAF	U.S. Air Force
yd^3	cubic yard(s)

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EXECUTIVE SUMMARY

Corrective Action Unit (CAU) 425 is located on the Tonopah Test Range, approximately 386 kilometers (240 miles) northwest of Las Vegas, Nevada. CAU 425 is listed in the Federal Facility Agreement and Consent Order (FFACO, 1996) and is comprised of one Corrective Action Site (CAS). CAS 09-08-001-TA09 consisted of a large pile of concrete rubble from the original Hard Target and construction debris associated with the Tornado Rocket Sled Tests.

CAU 425 was closed in accordance with the FFACO and the Nevada Division of Environmental Protection-approved Streamlined Approach for Environmental Restoration Plan for CAU 425: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range, Nevada (U.S. Department of Energy, Nevada Operations Office, 2002). CAU 425 was closed by implementing the following corrective actions:

The approved corrective action for this unit was clean closure. Closure activities included:

- Removal of all the debris from the site.
- Weighing each load of debris leaving the job site.
- Transporting the debris to the U.S. Air Force Construction Landfill for disposal.
- Placing the radioactive material in a U.S. Department of Transportation approved container for proper transport and disposal.
- Transporting the radioactive material to the Nevada Test Site for disposal.
- Regrading the job site to its approximate original contours/elevation.

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1.0 INTRODUCTION

This Closure Report (CR) documents the activities undertaken to close Corrective Action Unit (CAU) 425, Area 9 Main Lake Construction Debris Disposal Area according to the Federal Facility Agreement and Consent Order (FFACO) of 1996. CAU 425 closure was performed according to the Nevada Division of Environmental Protection (NDEP)-approved Streamlined Approach for Environmental Restoration (SAFER) Plan for CAU 425 (U.S. Department of Energy, Nevada Operations Office [DOE/NV], 2002). CAU 425 consists of one Corrective Action Site (CAS), 09-08-001-TA09: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range (TTR), Nevada. The site is located approximately 81 meters (m) (265 feet [ft]) north of Edwards Freeway northeast of Main Lake on the TTR (Figure 1).

The Construction Debris Disposal Area was used to collect debris from various projects in and around Area 9. The site was composed of concrete slabs and metal rebar, wooden telephone poles from the early Tornado Rocket Sled Tests, and concrete rubble from the demolition of the Hard Target. It is estimated that the site contained approximately 2,280 cubic meters (m^3) (3,000 cubic yards [yd^3]) of construction-related debris (Figure 2).

1.1 PURPOSE

The Construction Debris Disposal Site is identified as CAU 425 in the FFACO (FFACO, 1996). The purpose of this CR is to document that the closure of CAU 425 complied with all of the closure requirements detailed in the NDEP-approved SAFER Plan (DOE/NV, 2002).

1.2 SCOPE

The closure strategy for CAU 425 was specified in the NDEP-approved SAFER Plan for CAU 425 (DOE/NV, 2002). The implemented closure strategy consisted of the following activities.

- Loading all material present at the site into end dumps.
- Screening the material for radiation contamination during removal.
- Segregating Depleted Uranium (DU) fragments and DU-impacted debris/soil from non-impacted debris/soil.
- Weighing each load of debris at the U.S. Air Force (USAF) TTR truck scales.
- Transporting debris to the USAF TTR Construction Landfill for disposal.
- Placing DU and DU-impacted debris/soil in a U.S. Department of Transportation-approved container for transport and disposal.
- Transporting the containerized DU from TTR to the Nevada Test Site (NTS) for disposal as low-level waste (LLW).

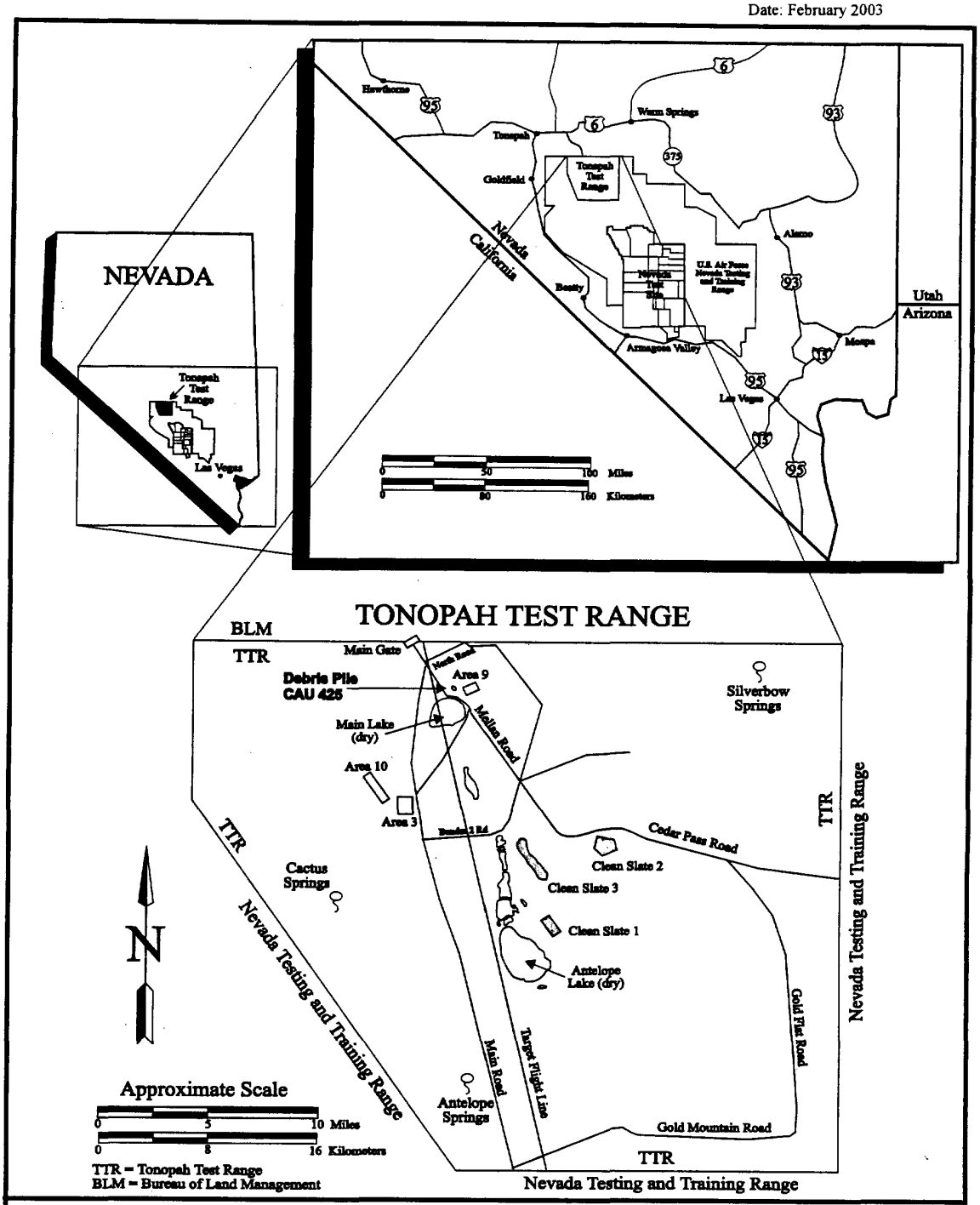

FIGURE 1
CAU 425 SITE LOCATION

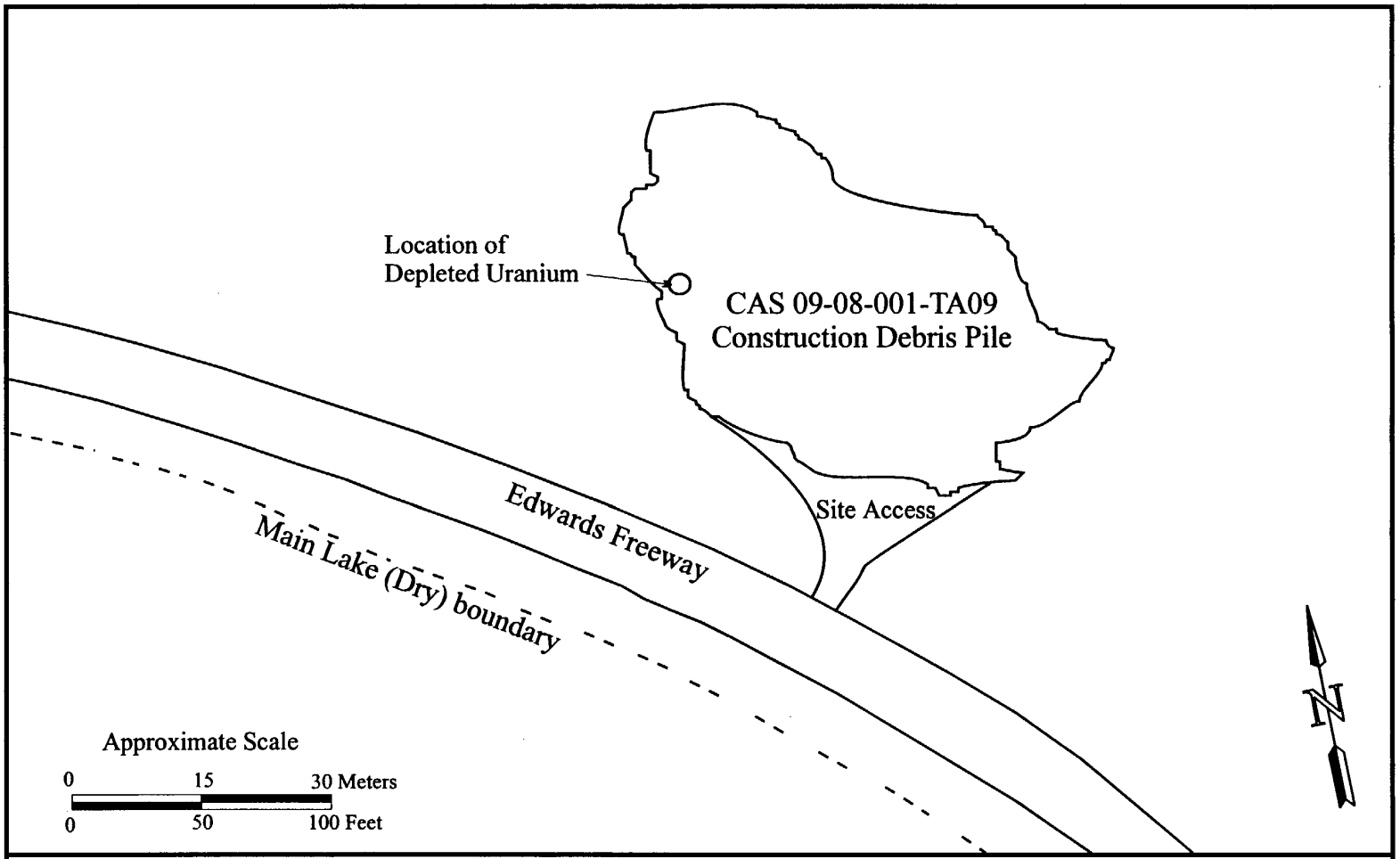

FIGURE 2
CAS 09-08-001-TA09 SITE LOCATION

1.3 CLOSURE REPORT CONTENTS

This CR is divided into the following sections:

- Section 1.0-Introduction
- Section 2.0-Closure Activities
- Section 3.0-Waste Disposition
- Section 4.0-Closure Verification Results
- Section 5.0-Conclusions and Recommendations
- Section 6.0-References

The appendices included in this document are provided as follows:

- Appendix A-Data Quality Objectives (DQOs)
- Appendix B-Waste Tracking Forms
- Appendix C-Radiological Survey Forms
- Appendix D- Waste Disposition Documentation
- Appendix E-Photographs of Closure Activities
- Appendix F-Nevada Division of Environmental Protection Document Review Sheet
- Distribution List

This report was developed using information and guidance from the following documents:

- Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range, Nevada, Rev. 0, DOE/NV–813 (DOE/NV, 2002).
- Field Management Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Site, Nevada Test Site, Nevada (Bechtel Nevada [BN], 2002a).
- Site Specific Health & Safety Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Site, Tonopah Test Range, Nevada (BN, 2002b).

1.3.1 Data Quality Objectives

The data quality objectives (DQOs) used for clean closure of CAU 425 were based on historical data generated from preliminary site assessment activities.

The DQO's primary model, the most probable scenario for the conditions at CAU 425, stated that there are no contaminants of potential concern (COPCs) and no radiation above the free-release criteria as specified in Table 4-2 of the Nevada Yucca Mountain Project Radiological Control Manual (DOE/NV, 2000). As detailed in Section 4.1, the alternative site conceptual model more closely resembled the actual site conditions since radiation greater than the free-release level was found onsite during closure activities.

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2.0 CLOSURE ACTIVITIES

This section details the specific corrective action activities completed during the closure of CAU 425: Area 9 Main Lake Construction Debris Disposal Area.

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

2.1.1 Preplanning and Site Preparation

Closure of CAU 425 was completed using the NDEP-approved SAFER Plan (DOE/NV, 2002). Prior to beginning site closure activities, the following pre-field activities were completed:

- Preparation of a National Environmental Policy Act documentation (checklist).
- Preparation of the Field Management Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Site, Tonopah Test Range, Nevada, (BN, 2002a).
- Preparation of the Site-Specific Health and Safety Plan for Closure Activities at Corrective Action Unit 425: Tonopah Test Range, Nevada, (BN, 2002b).
- Preparation of a U.S. DOE, National Nuclear Security Administration (NNSA)Nevada Operation Office Real Estate/Operations Permit.
- Preparation of BN Excavation and Penetration Permit.

The following is the scope of the closure actions implemented for CAU 425.

2.1.2 CAS 09-08–001-TA09: Corrective Action Activities

CAS 09-08-001-TA09 was clean closed by removing all of the construction debris from the site. Removal activities were initiated on the south side of the debris pile. Before each area of the debris was disturbed, a Radiological Control Technician (RCT) conducted a direct frisk of the debris about to be removed. A front-end loader was then used to collect a bucket of construction debris. The first bucket of debris for each end dump was directly frisked using a Ludlum 101 count rate meter with a pancake probe. The purpose of performing a direct frisk of the debris was to detect any elevated levels of radiation within the debris before it was placed into an end dump. The RCT reported the results of his survey to the Technical Lead (TL), who recorded the results on waste tracking forms (Appendix B). After the loader removed a bucket of debris from the pile, the RCT completed a direct frisk on the newly exposed face of the debris. This process was repeated until an end dump was filled with debris.

Once an end dump was full of construction debris, it was sent to the TTR Area 3 truck scale where the end dump was weighed. After the end dump was weighed, it dumped its load at the USAF TTR construction landfill and returned to the job site. Once the end dump arrived back at the job site, the TL recorded the weight of the load dumped, along with the trucking number, and

time the end dump left, and returned to the job site. This process continued until all the construction debris and concrete rubble were removed from the site.

At the end of each day, the RCT collected swipes from all pieces of heavy equipment used that day. These swipes were surveyed using a Tennelec counter to check for any elevated levels of removable radiation contamination on the heavy equipment. Results of these surveys are included in Appendix C.

After approximately 2,140 m^3 (2,800 yd^3) of debris was removed, clean debris-free soil located on the north side of the site was used to return the site to its original grade and fill divots created during the debris removal process. Once all of the site activities were completed, a final radiological survey was conducted of all of the heavy equipment used, ensuring that they did not possess removable contamination above the free-release criteria. The heavy equipment was released from TTR after all swipes indicated that the equipment met the free-release criteria (DOE/NV, 2000).

On July 17, 2002, during the debris removal process, an area of elevated radiation was detected by the RCT in the southwestern portion of the work area (Figure 2). Results of the radiation survey are included in Appendix C. Upon closer inspection, the source of radiation was determined to be several small pieces of weathered DU. Immediately after the DU was detected, an area of approximately 20.9 square meters (25 square yards) was roped off around the DU and the area posted as a radiological materials area (RMA). Immediately, debris removal activities ceased inside the RMA. The RCT made a thorough investigation of the surrounding area for any additional DU. A Record of Technical Change (ROTC) to the SAFER plan and a Radiological Work Permit were prepared to allow the radiological material to be removed from the area and containerized for disposal. Work activities outside the RMA continued in the same manner as described earlier, until all that remained at the site was the roped-off RMA. Once the ROTC and RWP were approved, a long-handled shovel was used to remove any accessible pieces of DU and DU-impacted debris/soil. A rake was used to spread out all of the remaining debris within the RMA so the RCT could locate any remaining radiologically contaminated debris/soil. All of the DU-impacted debris/soil that was placed into the drum was found from within 3 m (10 ft) of the original piece of DU. A total of approximately 0.011 m^3 (0.39 cubic feet [ft^3]) of DU and DU-impacted debris/soil was placed into a 208 liter [L] (55 gallon [gal]) drum. After site activities were completed, the drum was left at the site inside a roped and posted area for waste management to collect and transport to the NTS for disposal. The drum was removed from the site on September 27, 2002 and transported to the NTS for disposal. The drum was staged at the NTS Area 5 LLW storage pad and disposed of in the Area 5 LLW pits on January 22, 2003.

2.2 DEVIATIONS FROM SAFER PLAN AS APPROVED

The following deviation occurred from the approved scope of work as presented in the NDEP-approved SAFER Plan (DOE/NV, 2002).

During the debris removal activities, DU-impacted debris/soil was detected. The original SAFER Plan specified that if any elevated levels of radiation above the free-release criteria were

discovered then debris removal activities in the immediate area would cease until a resolution had been agreed upon and a Record of Technical Change to the SAFER Plan had been approved by the NNSA Nevada Site Office and NDEP. On July 17, 2002, DU with radiation above the free-release criteria was discovered and debris removal activities in the southwest portion of the debris pile were suspended until a ROTC to the SAFER Plan was completed and approved. The ROTC and a RWP were prepared and approved and provided a safe and effective method for segregating, packaging and disposing of the DU and DU-impacted debris/soil without effecting the site closure work schedule.

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

The corrective action field activities began in July 2002 and were completed in August 2002. A corrective action schedule as completed is provided in Figure 3.

2.4 SITE PLAN/SURVEY PLAN

Because the CAU 425 was clean closed, verification data were not required for closure. Radiological survey results document the clean closure of DU-impacted debris/soil at the site. As-built drawings are not included in this CR because engineering construction was not required as part of this site closure.

ACTIVITY DESCRIPTION	Completion Date	July 2002	August 2003
Corrective Action Unit 425			
Closure Activities in the Field			
Mobilize equipment/personnel to site	07/08/2002	▲	
Debris Removal Activities	08/07/2002	▲———	———▼
Demobilize Site	08/08/2002		▲

FIGURE 3
CAU 425 CLOSURE ACTIVITIES AS COMPLETED

3.0 WASTE DISPOSITION

The wastes produced during closure of CAU 425 included sanitary waste (construction debris) and LLW (DU). All wastes were managed according to state and federal regulations, DOE orders, and BN procedures.

During closure activities at CAU 425, approximately 2,140 m^3 (2,800 yd^3) of construction related debris was removed from the site and transported to the TTR USAF construction debris landfill. Documentation giving the contents, weight, and radiological survey results for each truck load of debris are provided in Appendices B and C.

During removal of the construction debris, pieces of inert ordnance were discovered within the debris pile. The USAF explosive ordnance disposal team was notified and brought to the site. BN was informed by the USAF verbally that the discovered ordnance was inert and that it could be treated as scrap metal. All of the inert ordnance was removed and disposed of in the TTR USAF construction landfill.

During the debris removal process approximately 0.011 m^3 (0.39 ft^3) of DU and DU-impacted debris/soil was segregated and packaged in a 208-L (55-gal) drum. The drum was transported to the NTS Area 5 LLW storage pad on September 27, 2002, where it is was staged pending disposal as LLW in one of the NTS Area 5 LLW pits. The drum was disposed of as LLW in the NTS Area 5 LLW pits on January 22, 2003. Waste disposition records on the disposal of the DU-impacted debris/soil are provided in Appendix D.

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4.0 CLOSURE VERIFICATION

CAU 425 was remediated through clean closure. Site closure was verified visually to confirm that all construction debris was removed from the site. After the debris was removed from the site, clean soil was used to restore the site to the original grade. No samples were collected for closure verification because all the construction debris was removed from the site and there was no evidence of contamination in the underlying soil. Radiological field screening results were used to document clean closure of the DU-impacted debris/soil.

4.1 DATA QUALITY ASSESSMENT

CAU 425 closure activities were performed to the criteria specified in the DQOs presented in the NDEP-approved SAFER Plan (DOE/NV, 2002). The DQOs primary conceptual site model was considered the probable scenario for the conditions at CAS 09-08-001-TA09. The primary conceptual model assumed there were no COPCs and no elevated levels of radiation present above the free-release criteria present within the debris pile. Radiological surveys, site inspections, and process knowledge supported this model.

DU-impacted debris/soil was discovered in the debris pile after removing 25 loads of debris from the site. At this point it was clear the site more closely resembled the alternative conceptual site model as specified in the SAFER plan (DOE/NV, 2002). One of the conditions outlined in the alternative conceptual site model included the presence of radiological contamination onsite at screening levels greater than background levels. Since DU-impacted debris/soil with radiological levels above the free-release criteria was detected onsite, the alternative conceptual site model as specified in the DQOs applies. The alternative model was considered less likely than the conditions outlined in the primary model.

4.2 USE RESTRICTIONS

CAU 425 was clean closed and the land use is therefore unrestricted. Because CAU 425 has been clean closed, no land use restrictions or post-closure monitoring requirements are applicable.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSION

CAU 425, Area 9 Main Lake Construction Debris Disposal Area, includes CAS 09-08-001-TA09. The following closure activities were performed at the site.

- All construction debris was radiologically surveyed, weighed, and transported to the USAF construction debris landfill for disposal.
- DU and DU-impacted debris/soil were identified as LLW by conducting radiological surveys and segregated from sanitary waste.
- The LLW was packaged, transported to the NTS Area 5 LLW storage pad and disposed of on January 22, 2003.
- The site was restored to its approximate original grade upon completing site closure activities.

Clean closure was accomplished according to the NDEP-approved SAFER Plan (DOE/NV, 2002).

5.2 RECOMMENDATIONS

Based on completion of site closure activities as documented by this CR, it is requested that a notice of completion be provided by the NDEP for CAU 425. Upon closure approval, CAU 425 will be promoted from Appendix III to Appendix IV of the FFACO (1996), "Closed Corrective Action Units."

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6.0 REFERENCES

Bechtel Nevada. 2002a. Field Management Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Site, Nevada Test Site, Nevada, Las Vegas, NV.

Bechtel Nevada. 2002b. Site Specific Health & Safety Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Site, Tonopah Test Range, Nevada, Las Vegas, NV.

BN, see Bechtel Nevada.

DOE/NV, see U.S. Department of Energy, Nevada Operations Office.

FFACO, see Federal Facility Agreement and Consent Order.

Federal Facility Agreement and Consent Order. 1996 (as amended). Agreed to by the State of Nevada, U.S. Department of Energy, and U.S. Department of Defense.

U.S. Department of Energy, Nevada Operations Office. 2000. NV/YMP Radiological Control Manual, Rev. 4, DOE/NV/11718-079, Las Vegas, NV.

U.S. Department of Energy, Nevada Operations Office. 2002. Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range, Nevada, Rev. 0, DOE/NV--813, Las Vegas, NV.

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APPENDIX A

DATA QUALITY OBJECTIVES FOR CAU 425*

* As presented in the approved Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range, Nevada, April 2002.

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ACRONYMS AND ABBREVIATIONS

BN	Bechtel Nevada
CAS	Corrective Action Site
CAU	Corrective Action Unit
COPC	Contaminant(s) of potential concern
DOE	U.S. Department of Energy
DOE/NV	U.S. Department of Energy, Nevada Operations Office
DQO	Data Quality Objective(s)
DU	Depleted uranium
EPA	U.S. Environmental Protection Agency
FFACO	Federal Facility Agreement and Consent Order
ft	foot(feet)
ft^2	square feet
ft^3	cubic feet
IT	International Technology
m	meter(s)
m^2	square meters
m^3	cubic meters
NNSA/NSO	U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office
NDEP	Nevada Division of Environmental Protection
SAFER	Streamlined Approach for Environmental Restoration
TTR	Tonopah Test Range
UXO	Unexploded ordnance

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APPENDIX A
DATA QUALITY OBJECTIVES FOR CORRECTIVE ACTION UNIT 425: AREA 9 MAIN LAKE CONSTRUCTION DEBRIS DISPOSAL AREA, TONOPAH TEST RANGE, NEVADA

Presentation of Known Data Related to Corrective Action Unit 425

The information presented in this worksheet is based on historical data generated from preliminary assessment activities for Corrective Action Unit (CAU) 425 at the Tonopah Test Range (TTR). Data quality objective (DQO) worksheets follow the U.S. Environmental Protection Agency (EPA) DQO guidance outline (EPA, 2000). The steps systematically build on the data acquired during preliminary assessment work and background research. Copies of the preliminary assessment work are retained in the project files.

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1.0 PROBLEM STATEMENT

1.1 State the problem.

CAU 425 is comprised of one Corrective Action Site (CAS): CAS 09-08-001-TA09, Construction Debris Disposal Area, TTR. In order to properly close this site, it must be determined if there is sufficient information to close this site under the Streamlined Approach to Environmental Restoration (SAFER) process.

1.2 Summarize the problem - combine the relevant background information into a concise description of the problem to be resolved.

1.2.1 CAS 09-08-001-TA09, Construction Debris Disposal Area (TTR)

CAS 09-08-001-TA09, Construction Debris Disposal, is located northeast of Main Lake approximately 81 meters (m) (265 feet [ft]) north of Edwards Freeway on the TTR. Based on information obtained from site investigations, personal interviews and historical documentation, the site was used to collect debris from various projects in and around Area 9. This included concrete from the Hard Target and early Tornado Rocket sled tests from the early 1960s until approximately 1989 (Elliston, 1998; Kluesner, 2001). The Hard Target was a circular target used for weapon air drops. It was 30 centimeters (12 inches) thick and was composed of approximately 2,280 cubic meters (m^3) (3,000 cubic yards [yd^3]) of concrete. The Hard Target was rebuilt in the 1970s and the debris from the original was disposed at the waste dump. The Tornado Rocket sled tests were performed in the early to mid 1970s. The tests were designed to simulate flying debris from a tornado. The tests consisted of telephone poles, portions of cars, and other nonhazardous materials, being slammed into concrete (West, 1993). The debris pile covers an area of approximately 2,323 square meters (m^2) (2,778 square feet [ft^2]). The surface debris consists primarily of concrete slabs with metal infrastructures and other concrete rubble. Wood scraps, plastic pipes, and other miscellaneous items have also been identified in the debris pile. (IT, 2001; U. S. Department of Energy, Nevada Site Office [DOE/NV], 1996a; Kluesner, 2001). The site was identified on July 14, 1993 by an IT Corporation, Las Vegas Office field crew during a review of aerial photographs. It is unknown if anything of concern is buried within the piles of debris that is not visible at the surface.

Based on historical documents and interviews there may have been depleted uranium (DU) released onto the Hard Target during weapon drops. Process knowledge indicates that any released DU was removed from the pad after tests were completed. A radiological survey of the site was conducted in 2001 since most of the debris originated from the Hard Target. The results of the survey indicated no radiation levels above background (IT, 2001). Historical documentation also indicates that a small pile of inert unexploded ordnance (UXO) was removed from this site in March of 1995. All UXO that was visible appeared in one location of the debris pile and was placed on top of the debris pile or to the side of it. All UXO that was observed at the site was removed. UXO waste included several inert bombs and scrap metal/fragments. All UXO removed was determined to be inert or unfused (IT, 1995).

The CAU 425 site is located in Cactus Flat. Cactus Flat is an intermontane basin, typical of the Basin and Range Physiographic Province, surrounded by the Cactus Range to the southwest, the northern portion of Kawich Range to the east, and the Monitor Range to the north (DOE/NV, 1994). Cactus Flat is made up of Quaternary-aged alluvium eroded from the surrounding volcanic highlands. The depth of the alluvium is unknown but exploratory drilling discovered the thickness to exceed 300 m (1,000 ft) (DOE/NV, 1996b). The alluvium layer is underlain by genetically related tuffs and lavas of the Thirsty Canyon Tuff unit, which can have a depth up to 152 m (500 ft) (DOE/NV, 1994). Beneath the Thirsty Canyon Tuff unit lie the rhyolitic tuffs of the Timber Mountain Tuff unit and the rhyolitic ash-fall and lavas of the Paintbrush Tuff unit. The Paintbrush unit is underlain by various layers of Miocene-aged volcanic lavas and tuffs and limestone and dolomite layers of various ages (U.S. Geological Survey, 1971). The depth to groundwater beneath Area 9 is estimated to be at a depth of 40 m (131 ft) below the ground surface and the groundwater flow direction is generally to the southwest (DOE/NV, 1996a).

2.0 DEVELOP/REFINE THE CONCEPTUAL MODEL

Available information from which the conceptual model is based was derived from site process knowledge, historical background information, site analysis, and personnel interviews relative to the activities related to the debris site.

2.1 Primary Model for CAS 09-08-001-TA09, Construction Debris Disposal Area (TTR)

The primary model is considered the most probable scenario for current conditions at the CAU 425 site. The proposed activities are based on the assumption that there are no contaminants of potential concern (COPC) and no elevated levels of radiation present above free release criteria within the debris pile. Radiological surveys, site inspections, and process knowledge support this model. Almost all debris at the site is expected to be from the Hard Target since the approximate volumes at each are nearly identical.

2.2 Alternate Model

The conditions under the alternate model are considered less likely than the conditions outlined in the primary model. No information suggests that conditions outside the primary model are present. The alternate conceptual site model for CAS RG-24-001-RD24 is similar to the primary model with one or more of the following exceptions:

- Conditions outside the scope of work are encountered.
- Staining indicating the presence of COPCs on any debris in piles or in soil beneath piles is observed.
- Radiological screening yields results in excess of background.
- Non-construction-related debris is observed.

3.0 IDENTIFY THE DECISION (Select the appropriate decision for the current phase of the site assessment process)

Development of a SAFER Plan will be prepared based on the currently available process knowledge, historical data, and survey data. The most probable closure decisions are identified below.

3.1 CAS 09-08-001-TA09, Construction Debris Disposal Area (TTR)

If no staining or other indications of the presence of COPC are visibly detected on any debris or in soil beneath debris piles, and no elevated levels of radioactivity are identified during closure activities, the site can be clean closed by excavation of the debris pile.

If any conditions outside of the scope of work are observed, then work will stop until an appropriate change of scope is identified and approved.

4.0 IDENTIFY THE INPUTS TO THE DECISION

4.1 Identify the information inputs needed and resolve the decision.

- Are forms of contamination present within the debris pile?

  Process knowledge and data generated from previous characterization activities are adequate to verify that the primary model has no forms of contamination present within the debris pile. Constant visual inspection of the site during excavation will also be used to assure that no forms of contamination are present at the debris pile.

- Is depleted uranium present within the debris pile?

  Process knowledge and data generated from previous characterization activities are adequate to verify the primary model, that there are no areas of radiation in excess of free release criteria are present within the debris pile. A radiological technician will be on site during the excavation process and will systematically screen, as described within the SAFER Plan, the debris before it is removed from the site to verify that there are no elevated levels of radiation.

- Is UXO present?

  Process knowledge and data gathered from previous characterization activities are adequate to verify that all UXO in the primary model has been removed from the debris pile and all was unfused or inert. Constant visual inspection of the site will be conducted to assure that no UXO is present within the debris pile.

4.2 List types of contaminants of potential concern and affected media.

There are no COPC expected to be present at this site.

4.3 Identify potential sampling approaches and appropriate analytical methods.

- Use existing characterization data and process knowledge to confirm or refute the conceptual model for the site.
- As part of DOE's interim action, a pile of inert UXO was removed from the site in 1995.
- There are not expected to be any forms of contamination found within the debris pile. For safety purposes constant visual inspection will be used to detect any forms of contamination during excavation activities.
- A radiological technician will be on-site during the excavation process and will systematically screen, as described in detail within the SAFER Plan, the debris before it is removed from the site to verify that levels of radiation do not exceed free release criteria.

5.0 DEFINE THE BOUNDARIES OF THE STUDY

5.1 Define the geographic areas of the field investigation.

5.1.1 Define the geographic area within which all decisions must apply (in some cases this may be defined by the Corrective Action Unit).

CAU 425 has been defined as the Area 9 Main Lake Construction Debris Disposal Area at the TTR. The study area specifically concerns the entire debris pile. The debris pile has an approximate area of 2,323 (m^2) (2,778 yd^2) and an approximate volume of 2,280 m^3 (3,000 yd^3). The site trends mostly east to west, with debris piling to a height of 1.2 m (4 ft) on the eastern portion of the pile and 1.5 m (5 ft) on the southwestern portion of the pile.

5.1.2 Specify the characteristics that define the population of interest.

The population of interest is the entire construction debris pile and is well defined. The debris has been placed on the ground surface and is defined by the boundary between the concrete debris and the native ground interface.

5.2 Define the time frame of the decision.

5.2.1 Determine the time frame to which the study data apply.

The study data should be relevant with the length of time allowed for by the SAFER process under the Federal Facility Agreement and Consent Order (FFACO) agreement.

5.2.2 Determine when to collect data.

Field activities (data collection) are scheduled to take place in fiscal year 2002 after approval of the final SAFER Plan. Data will be collected at times that meet the security and safety constraints of the TTR site, and at times when weather conditions that allow adequate site access and safe working conditions.

Radiological screening will be used to detect radiation above free release criteria before the debris is removed off-site. There will be no other data collection, unless staining or other evidence of the presence of COPC or potential environmental impact is visibly detected.

5.2.3 Define relevant time constraints.

- The final SAFER Plan is due to the U.S. Department of Energy, National Nuclear Security Agency Nevada Operations Office by April 30, 2002.
- Fieldwork is scheduled for late summer of 2002.

5.3 Identify any practical constraints on data collection.

1. Approval of the SAFER Plan and the DQO process by the NDEP.
2 Equipment access and mobility at the TTR.
3. Meteorological events that may impact fieldwork activities.
4. Health and safety of workers.
5. Operational/Security issues at the TTR.

6.0 DEVELOP A DECISION RULE - DEFINE A LOGICAL BASIS FOR CHOOSING AMONG ALTERNATIVE ACTIONS

6.1 Specify the action level or preliminary action level for the decision.

Sufficient process knowledge and site surveys exist to support the conceptual model. No forms of contamination are expected at this site. There will be continuous visual inspection of the site to ensure site safety. If any conditions outside the scope of work are observed, then work will stop until an appropriate change of scope is completed.

The site will be clean closed through the removal of all construction debris. Debris will be screened, loaded onto trucks, and transported to the U.S. Air Force TTR Construction Debris Landfill near Area 10. Each load will be weighed to document volume of debris removed.

7.0 OPTIMIZE THE DESIGN - OUTLINE A SAMPLING DESIGN, SPECIFYING THE OPERATIONAL DETAILS OF THE SAMPLING PLAN WHICH FALLS WITHIN THE PROJECTS CONSTRAINTS

7.1 Develop general sampling and analysis design alternatives.

Material removed from the site will be screened for radioactivity above free release criteria. The work area will be continuously visually inspected for staining indicating the presence of COPCs and/or areas of environmental impact.

7.2 Select the most resource-effective design that satisfies all of the DQOs.

Excavate the debris in a manner that allows for constant visual inspection and radiation field screening of the debris pile in a systematic method, as described in detail within the SAFER Plan.

7.3 Document the operational details and theoretical assumptions of the selected design in the sampling and analysis plan.

There will be no sampling activities conducted at this site since no forms of contamination are expected. The radiological screening process for this site will be discussed in detail within the SAFER Plan.

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APPENDIX B

WASTE TRACKING FORMS

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Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-11-02	1-1	16:47	A-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	51,716 lbs	15:29
7-11-02 + 7-15-02	2-2	13:00 7-15-02	B-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	64,880 lbs	10:55 7-15-02
7-11-02 + 7-15-02	3-3	13:00 7-15-02	B-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	50,460 lbs	10:55 7-15-02
7-15-02	3-4	14:30	B-4 + A-3	Concrete Rubble Concrete slabs w/rebar	10-15 MR/hr 120-150 cpm	None	24,460 lbs	13:30
7-15-02	2-5	14:55	B-4 + A-3	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	None	29,100 lbs	13:45
7-15-02	3-6	15:40	B-4 + A-3	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	None	34,780 lbs	14:47
7-15-02	2-7	16:08	A-5 + A-3	Concrete Rubble Concrete slabs w/ rebar	10-15 MR/hr 120-150 cpm	Some rusted metal pieces -removed	39,380 lbs	15:10
7-15-02 + 7-16-02	3-8	9:50	A-5 A-3 B-5	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	None	36,560 lbs	8:35 7-16-02
7-15-02 + 7-16-02	2-9	9:40	A-3	Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	loose pieces of rebar -removed	39,960 lbs	8:40 7-16-02

Name: Michael R. Krezic Date: 7-16-02

Signature: [signature]

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-16-02	3-10	11:27	A-3 A-5 B-5	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	Loose metal w/in debris -removed	39,520 lbs	10:32
7-16-02	2-11	11:17	A-3 A-5 B-5	Concrete Rubble Concrete slabs w/rebar	10-15 MR/hr 120-150 cpm	Loose metal w/in debris -removed	58,360 lbs	10:15
7-16-02	2-12	13:30	A-3 A-5 B-5	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	Loose metal w/in debris -removed	45,840 lbs	11:45 w/lunch
7-16-02	3-13	13:37	A-2 B-5	Concrete Rubble some soil	10-15 MR/hr 120-150 cpm	None	48,820 lbs	11:45 w/lunch
7-16-02	2-14	14:45	A-2 B-5	Concrete Rubble some soil	10-15 MR/hr 120-150 cpm	None	46,588 lbs	13:45
7-16-02	3-15	14:55	A-3 B-5	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	Loose metal w/in debris -removed	43,960 lbs	14:14
7-16-02	1-16	15:47	B-4 B-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	26,220 lbs	14:43
7-16-02	2-17	16:32	A-2 B-5	Concrete Rubble Concrete slabs w/rebar	10-15 MR/hr 120-150 cpm	scrap metal w/in debris -removed	53,190 lbs	15:00 w/gas Fill
7-16-02	3-18	16:30	A-2 B-3	Concrete Rubble Concrete slabs w/rebar	10-15 MR/hr 120-150 cpm	scrap metal w/in debris -removed	44,320 lbs	15:15 w/gas Fill

Name: Michael Kruzic Date: 7-16-02

Signature: Michael Kruzic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-16-02	1-19	17:00	A-2	Concrete Rubble Concrete Slabs w/rebar wood telephone pole	10-15 MR/hr 120-150 cpm	contained wood and some removable metal	38,930 lbs	16:00
7-17-02	3-20	8:45	A-2 B-5	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	some loose metal-removed	41,780 lbs	7:52
7-17-02	2-21	8:56	A-2 B-5	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	some loose metal -removed	56,260 lbs	8:00
7-17-02	1-22	9:32	A-2 B-5 B-6	Concrete Rubble Concrete Slabs w/rebar	10-15 MR/hr 120-150 cpm	some loose metal -removed	43,020 lbs	8:35
7-17-02	3-23	10:00	A-2 B-5 B-6	Concrete Rubble Concrete Slabs w/rebar large concrete pylon some wood	10-15 MR/hr 120-150 cpm	some loose metal -removed	40,880 lbs	9:06
7-17-02	2-24	10:18	A-2 B-5	Concrete Rubble Concrete Slabs w/rebar large concrete Pylon Concrete Filled tube	10-15 MR/hr 120-150 cpm	some loose metal -removed	42,100 lbs	9:58
7-17-02	1-25	10:44	A-2 B-5	Concrete Rubble Concrete Slabs w/rebar Concrete Filled tube	10-15 MR/hr 120-150 cpm	some loose metal -removed	42,100 lbs	9:50
7-17-02	3-26	11:08	B-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None.	46,080 lbs	10:14
7-17-02	2-27	11:30	B-4 B-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	43,260 lbs	10:40

Name: Michael R. Kruzic Date: 7-17-02

Signature: Michael R. Kruzic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-17-02	1-28	13:50	B-6 C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	51,230 lbs	11:25 w/lunch
7-17-02	3-29	14:15	B-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	43,080 lbs	11:36 w/ lunch
7-17-02	2-30	15:21	B-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	50,380 lbs	14:26
7-17-02	1-31	15:35	B-5 C-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	50,540 lbs	14:39
7-17-02	3-32	15:45	B-4 B-5 C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	45,000 lbs	15:00
7-17-02	2-33	16:30	A-2 A-3 B-2 B-3	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	53,680 lbs	15:37
7-17-02 7-18-02	1-34	8:50	A-3 B-3	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	49,460 lbs	8:00 7/18/02
7-17-02 7-18-02	3-35	8:55	B-3 B-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	52,220 lbs	8:00 7/18/02
7-18-02	2-36	9:41	C-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	42,120 lbs	8:53

Name: Michael R. Kruzic Date: 7-18-02

Signature: Michael Kruzic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-18-02	1-37	10:14	B-5 C-5	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	51,716 lbs	9:08 w/gas Fill
7-18-02	3-38	10:17	B-4 C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	46,640 lbs	9:15 w/gas Fill
7-18-02	2-39	11:18	C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	43,340 lbs	9:58 w/gas Fill
7-18-02	1-40	11:22	C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	46,460 lbs	10:28
7-18-02	3-41	11:41	C-5 C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	43,360 lbs	10:56
7-18-02	2-42	13:30	C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	44,820 lbs	11:30 w/ lunch
7-18-02	1-43	14:10	C-5 C-6	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	45,180 lbs	11:45 w/ lunch
7-18-02	3-44	14:25	B-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	42,580 lbs	13:40
7-18-02	2-45	14:50	B-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	50,580 lbs	14:00

Name: Michael Krupic (Michael R. Krupic) Date: 7/18/02

Signature: _____

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-18-02	1-46	15:10	B-4	Concrete Rubble	10-15 MR/hr 120-150 cpm	None	44,340 lbs	14:14
7-22-02	3-47	9:50	C-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	46,400 lbs	9:00
7-22-02	2-48	10:07	C-5 C-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	43,500 lbs	9:14
7-22-02	1-49	10:50	C-5 C-6 D-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	50,640 lbs	9:53
7-22-02	3-50	10:55	C-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	49,740 lbs	10:10
7-22-02	2-51	11:24	D-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	47,270 lbs	10:37
7-22-02	1-52	11:55	C-5 D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	52,360 lbs	11:05
7-22-02	3-53	12:55	C-5 C-6 D-5 D-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	47,160 lbs	11:18
7-22-02	2-54	13:55	D-5 D-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	26,340 lbs	11:45 w/ lunch

Name: Michael R. Kruzic Date: 7-22-02

Signature: Michael Kruzic

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Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-22-02	3-55	14:19	D-6 E-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	48,200 lbs	13:27
7-22-02	1-56	14:50	D-5 D-6	Concrete rubble Concrete slabs	10-15 MR/hr 120-150 cpm	None	47,380 lbs	14:00
7-22-02	2-57	15:00	E-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	45,340 lbs	14:10
7-22-02	3-58	15:20	E-5 E-6	Concrete rubble	10-15 MR/hr 120-150 cpm	Metal pipes and rods - removed	45,480 lbs	14:40
7-22-02	1-59	16:37	D-6	Concrete rubble	10-15 MR/hr 120-150 cpm	None	46,380 lbs	15:49
7-22-02	2-60	16:25	D-5 D-6	Concrete rubble Concrete Slabs	10-15 MR/hr 120-150 cpm	None	53,180 lbs	15:30
7-22-02	3-61	16:44	E-5 E-6	Concrete rubble	10-15 MR/hr 120-150 cpm	Metal pipes and rods - removed	55,800 lbs	15:57
7-23-02	2-62	10:06	E-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	53,460 lbs	8:45
7-23-02	1-63	9:55	D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	50,720 lbs	9:00

Name: Michael R. Kruzic Date: 7-23-02

Signature: Michael R. Kruzic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-23-02	3-64	10:13	D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	50, 360 lbs	9:20
7-23-02	1-65	11:04	D-5 E-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	52,880 lbs	10:14
7-23-02	2-66	11:07	D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	51, 640 lbs	10:29
7-23-02	3-67	11:32	D-4 D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	Metal pipes. -removed	49,740 lbs	10:43
7-23-02	1-68	14:35	D-4 D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	50,400 lbs	13:41 w/ water Fill
7-23-02	2-69	13:44	D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	36,360 lbs	11:39 w/ lunch
7-23-02	3-70	13:46	D-4 D-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	51, 140 lbs	11:50 w/ lunch
7-23-02	2-71	14:19	D-4 D-5 C-4 C-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	49, 400 lbs	13:14
7-23-02	3-72	15:05	C-4 C-5	Concrete rubble	10-15 MR/hr 120-150 cpm	None	48, 500 lbs	14:19

Name: Michael Kruze Date: 7-23-02

Signature: Michael Kruze

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-23-02	1-73	16:00	C-4	Concrete rubble	10 - 15 MR/hr 120 - 150 cpm	None	47,160 lbs	15:05
7-23-02	2-74	16:21	D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	46, 260 lbs	15:20
7-23-02	3-75	16:25	C-4 D-4	Concrete rubble	10 - 15 MR/hr 120-150 cpm	None	49, 340 lbs	15:35
				Last Load				

Name: Michael R. Kruzic Date: 7-23-02

Signature: Michael R. Kruzic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-24-02	1-76	9:50	D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	48,740 lbs	8:25 w/fuel
7-24-02	2-77	9:53	C-4 D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	51,840 lbs	8:29 w/fuel
7-24-02	3-78	9:58	D-4	Concete rubble	10-15 MR/hr 120-150 cpm	None	45,020 lbs	8:32
7-24-02	1-79	11:24	B-4 D-4	Concete rubble	10-15 MR/hr 120-150 cpm	None	43,760 lbs	10:26
7-24-02	3-80	11:32	B-4 C-4	Concete rubble	10-15 MR/hr 120-150 cpm	None	47,760 lbs	10:41
7-24-02	2-81	11:37	B-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	43,400 lbs	10:42
7-24-02	1-82	13:23	B-4 C-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	47,840 lbs	11:28
7-24-02	3-83	14:22	C-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	45,500 lbs	13:27
7-24-02	2-84	14:30	B-4 C-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	30,520 lbs	13:35

Name: Michael R. Kruzz Date: 7-24-02

Signature: _____

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-24-02	1-85	14:43	C-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	48,660 lbs	13:48
7-24-02	3-86	15:28	C-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	50,800 lbs	14:36
7-24-02	2-87	16:12	B-4 C-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	34,940 lbs	15:15
7-24-02	1-88	16:15	C-4 D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	46,380 lbs	15:15
7-24-02	3-89	16:36	C-4 D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	48,300 lbs	15:50
				Just Send				
	1							

Name: Michael R. Krizic Date: 7-24-02

Signature: Michael Krizic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-25-02	3-90	9:22	D-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	48,320 lbs	8:30
7-25-02	2-91	9:51	C-4 D-4	Concrete rubble Concrete slabs	10-15 MR/hr 120-150 cpm	None	48,480 lbs	8:53
7-25-02	1-92	10:16	C-3 C-4	Concrete rubble Concrete slabs	10-15 MR/hr 120-150 cpm	None	46,700 lbs	9:10
7-25-02	3-93	10:34	C-3	Concrete rubble	10-15 MR/hr 120-150 cpm	None	47,060 lbs	9:35
7-25-02	2-94	11:10	C-3 C-4	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	51,600 lbs	10:15
7-25-02	1-95	11:22	C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	42,920 lbs	10:32
7-25-02	3-96	13:00	C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	45,740 lbs	11:01 w/lunch
7-25-02	2-97	13:15	B-3 B-4	Concrete rubble	10-15 MR/hr 120-150 cpm	None	45,290 lbs	11:22 w/lunch
7-25-02	1-98	13:30	B-3 C-3 D-3	Concrete rubble	10-15 MR/hr 120-150 cpm	None	50,440 lbs	11:45 w/lunch

Name: Michael R. Kruzic Date: 7-25-02

Signature:

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-25-02	3-99	14:15	C-3 D-3	Concrete rubble	10-15 MR/hr 120-150 cpm	None	49,320 lbs	13:20
7-25-02	2-100	14:41	D-3	Concrete rubble wood metal shrapnel	10-15 MR/hr 120-150 cpm	aerosol cans - removed	45,180 lbs	13:32
7-25-02	1-101	14:55	D-3	Concrete rubble	10-15 MR/hr 120-150 cpm	None	49,260 lbs	13:45
7-25-02	3-102	15:30	C-3 D-3	Concrete rubble Concrete slabs Soil	10-15 MR/hr 120-150 cpm	None	45,300 lbs	14:31
7-25-02	2-103	16:00	D-3 C-3	Concrete rubble Concrete slabs Soil	10-15 MR/hr 120-150 cpm	None	34,740 lbs	15:11
7-25-02	1-104	16:01	B-3 C-3	Concrete rubble	10-15 MR/hr 120-150 cpm	None	53,160 lbs	15:13
				Just Info				
	1							

Name: Michael R. Krazic Date: 7-25-02

Signature: Michael Krazic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-29-02	3-105	9:25	B-3 C-3	Concrete rubble	10-15 MR/hr 120-150 cpm	None	45,140 lbs	8:24
7-29-02	2-106	9:50	B-3	Concrete rubble Cinder Blocks Concrete slabs w/rebar	10-15 MR/hr 120-150 cpm	None	48,701 lbs	8:51
7-29-02	1-107	10:07	B-3 C-3	Concrete rubble Concrete slabs w/rebar Concrete filled metal tub	10-15 MR/hr 120-150 cpm	None	43,400 lbs	9:06
7-29-02	3-108	10:36	C-3 D-3	Concrete rubble Concrete slabs w/rebar Soil	10-15 MR/hr 120-150 cpm	None	37,120 lbs	9:37
7-29-02	2-109	11:29	C-3	Concrete rubble Concrete slabs Telephone Pole Soil	10-15 MR/hr 120-150 cpm	None	44,820 lbs	10:25
7-29-02	1-110	11:34	B-3	Concrete rubble Concrete slabs w/rebar	10-15 MR/hr 120-150 cpm	Metal piping and metal scrap removed	43,040 lbs	10:35
7-29-02	3-111	11:50	B-3 C-3	Concrete rubble Concrete slabs	10-15 MR/hr 120-150 cpm	None	44,220 lbs	10:50
7-29-02	2-112	13:55	B-3	Concrete rubble Concrete slabs Telephone poles Soil	10-15 MR/hr 120-150 cpm	None	46,480 lbs	11:45
7-29-02	1-113	13:59	C-3	Concrete rubble Concrete slabs	10-15 MR/hr 120-150 cpm	None	47,000 lbs	11:50

Name: Michael R. Kruzic Date: 7-29-02

Signature: [signature]

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-29-02	3-114	14:33	B-3 C-3	Concrete rubble Concrete slabs Telephone poles Soil	10-15 MR/hr 120-150 cpm	None	42,600 lbs	13:41
7-29-02	2-115	15:13	B-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	40,320 lbs	14:13
7-29-02	1-116	15:30	C-3	Concrete rubble Concrete slabs Soil	10-15 MR/hr 120-150 cpm	None	52,920 lbs	14:29
7-29-02	3-117	15:46	C-3	Concrete rubble Concrete slabs Soil	10-15 MR/hr 120-150 cpm	None	44,460 lbs	14:50
7-29-02	2-118	16:40	B-3 C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	49,680 lbs	15:41
				Last Load				

Name: Michael R Kruzic Date: 7/31/02

Signature: Michael Kruzic

Bechtel Nevada
Environmental Restorati

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-30-02	2-119	9:06	B-3 C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	44,860 lbs	8:05
7-30-02	3-120	9:01	B-2 B-3 C-2 C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	53,760 lbs	8:05
7-30-02	1-121	9:45	B-2 B-3	Concrete rubble metal fragments Soil	10-15 MR/hr 120-150 cpm	Metal fragments and shrapnel present	60,820 lbs	8:45
7-30-02	3-122	10:17	C-2 C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	52,520 lbs	9:21
7-30-02	2-123	11:00	C-2 C-3	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	53,880 lbs	9:33
7-30-02	1-124	11:30	B-1	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	55,900 lbs	10:32
7-30-02	3-125	11:46	B-1	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	37,080 lbs	10:58
7-30-02	2-126	14:14	B-1	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	41,000 lbs	11:12 w/ lunch
7-30-02	1-127	13:40	B-1	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	34,020	11:39 w/ lunch

Name: Michael R Krueger **Date:** 7-30-02

Signature: Michael Krueger

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
7-30-02	3-126	14:01	B-1	Soil	10-15 MR/hr 120-150 cpm	None	37,880 lbs	11:57 w/ lunch
7-30-02	1-127	16:33	B-1	Soil	10-15 MR/hr 120-150 cpm	None	51,720 lbs	15:40 w/ water fill
7-30-02	3-128	15:11	B-1	Soil	10-15 MR/hr 120-150 cpm	None	50,200 lbs	14:27
7-30-02	2-129	15:49	B-1	Concrete slabs Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	47,500 lbs	14:45
7-30-02	3-130	16:27	C-2	Concrete rubble Soil	10-15 MR/hr 120-150 cpm	None	55,800 lbs	15:38
7-31-02	2-131	9:33	C-2	Soil	10-15 MR/hr 120-150 cpm	None	24,140 lbs	8:25
7-31-02	3-132	16:28	C-1 C-2	Soil	10-15 MR/hr 120-150 cpm	None	46,820 lbs	15:45
				Just Soil				

Name: Michael R. Krezic Date: 7-30-02

Signature: Michael R. Krezic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
8-1-02	1-133	9:25	A-1 B-1	Soil	10-15 MR/hr 120-150 cpm	None	58,300 lbs	8:25
8-102	3-134	9:30	A-1 B-1	Soil	10-15 MR/hr 120-150 cpm	None	58,960 lbs	9:36
8-1-02	1-135	10:23	A-1	Concrete rubble Scrap metal Rubble/Soil	10-15 MR/hr 120-150 cpm	Rusted metal	51,960 lbs	9:35
8-1-02	3-136	11:17	A-1 B-1	Soil	10-15 MR/hr 120-150 cpm	None	45,760 lbs	10:30
8-1-02	1-137	1300	A-1	Soil	10-15 MR/hr 120-150 cpm	None	41,760 lbs	11:25 w/lunch
8-1-02	3-138	14:45	B-1 C-1	Soil	10-15 MR/hr 120-150 cpm	None	39,760 lbs	13:08
				Just Dust				

Name: Michael R. Kruzic Date: 8-01-02

Signature: Michael Kruzic

Bechtel Nevada
Environmental Restoration

CAU 425 Waste Tracking Form

Date	Truck Number	Truck Arrival Time	Site Grid Location	Waste Description	Rad Screening Results (unit?)	Observations	Waste Weight	Departure Time
8-7-02	1-139	9:31	B-3 E-5 E-3 E-4	Concrete rubble wood scraps metal cable	10-15 MR/hr 120-150 cpm	None	52,800 lbs	3:25
8-8-02	3-140	NA	D-5 B-3 E-5 E-6	Concrete rubble Wood scraps	10-15 MR/hr 120-150 cpm	None	59,300 lbs	11:15
				Tool Jam				

Name: Michael R. Kruzic Date: 8-8-02

Signature: Michael Kruzic

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APPENDIX C

RADIOLOGICAL SURVEY FORMS

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Bechtel Nevada — RADIATION SURVEY REPORT

Number 02-ER-TTR-01 Page 1 of 1

RCT(S): R. PARKE		SIGNATURE: R. Parke	DATE: 7-11-02
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU 425

COUNTING EQUIPMENT USED IN COLUMN 1+2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3		INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101	NUMBER 46554	INSTRUMENT USED IN COLUMN N/A		INSTRUMENT USED IN COLUMN N/A	
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN 4		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
EFFICIENCY .33	EFFICIENCY .40	EFFICIENCY N/A	EFFICIENCY	INSTRUMENT Bicron	NUMBER C566E	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER
MDA 8.2	MDA	MDA N/A	MDA						
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.5	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO					
COUNT TIME 1 min	1 min	COUNT TIME							

PURPOSE: Debris Removal to TTR Dump From CAU 425

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER UNIT cpm/100cm² FIXED + ☐ REMOVE ☒ SWIPE ☐ N/A	COLUMN 2 α☐ β☒ γ☐ OTHER UNIT cpm/100cm² FIXED + ☐ REMOVE ☒ SWIPE ☐ N/A	COLUMN 3 α☐ β☒ γ☒ OTHER UNIT cpm/probe FIXED + ☐ REMOVE ☒ SWIPE ☐ N/A	COLUMN 4 α☐ β☒ γ☒ OTHER UNIT MR/hr FIXED + ☐ REMOVE ☒ SWIPE ☐ N/A	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED + ☐ REMOVE ☐ SWIPE ☐ N/A
0745	**BACKGROUND** (Gross)	NA	0	71	120-150	10-15	~~TTR 7-11-02 10-15~~
1500	Truck load # 1 direct Readings	NA	NA	NA	130-150	10-15	
"	Truck load # 2 direct Readings	NA	NA	NA	130-150	10-15	
1600	Truck load # 3 direct Readings	NA	NA	NA	130-150	10-15	A
1630	End of day Front Loader	10	2	101	80-100	10	N
1640	End of day 20yd Dump Truck	4	2	81	80-100	10	
	A						
	N						

COMMENTS: Direct readings of Debris taken prior to start of loading and prior to each truck load. All smears taken at end of day after equipment is finished for the day.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada

RADIATION SURVEY REPORT

Number 02-ER-TTR-02 Page 1 of 1

RCT(S): R. Pancke | SIGNATURE: R. Pancke | DATE: 7-15-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/ RWP NO: NA | PROJECT / WORK ORDER: CAU 425

COUNTING EQUIPMENT USED IN COLUMN 1 + 2
INSTRUMENT L 2929 NUMBER 155582
ALPHA EFFICIENCY 33% | BETA EFFICIENCY 41%
ALPHA MDA 13 | BETA MDA 78
CONVERSION FACTOR 3.03 | CONVERSION FACTOR 2.4
COUNT TIME 1 min | 1 min

COUNTING EQUIPMENT USED IN COLUMN: N/A

INSTRUMENT USED IN COLUMN 3
INSTRUMENT Model 101 NUMBER 46554
COUNTING EQUIPMENT USED IN COLUMN 4
INSTRUMENT Bicron NUMBER C 566 F

INSTRUMENT USED IN COLUMN: N/A

ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO

PURPOSE: Debris Removal From CAU 425 to TTR Dump

COLUMN 1: α ☑ β ☐ γ ☐ OTHER — UNIT cpm/100 cm² — FIXED + REMOVE ☐ SWIPE ☑ N/A ☐
COLUMN 2: α ☐ β ☑ γ ☐ OTHER — UNIT cpm/100 cm² — FIXED + REMOVE ☐ SWIPE ☑ N/A ☐
COLUMN 3: α ☐ β ☑ γ ☑ OTHER — UNIT cpm/probe — FIXED + REMOVE ☑ SWIPE ☐ N/A ☐
COLUMN 4: α ☐ β ☑ γ ☑ OTHER — UNIT µR/hr — FIXED + REMOVE ☑ SWIPE ☐ N/A ☐
COLUMN 5: α ☐ β ☐ γ ☐ OTHER — UNIT — FIXED + REMOVE ☐ SWIPE ☐ N/A ☐

TIME	DESCRIPTION OF SURVEY	No. of Points	Column 1	Column 2	Column 3	Column 4	Column 5
0700	**BACKGROUND** (Gross)	NA	0.3	72	120-150	10-15	
1315	Truck load #1	NA	NA	NA	120-150	10-15	
	Truck load #2	NA	NA	NA	120-150	10-15	
	Truck load #3	NA	NA	NA	120-150	10-15	
	Truck load #4	NA	NA	NA	120-150	10-15	
	End of Day Front Loader	10	1	86	80-100	10	
	End of Day 20yd Dump #1	5	2	85	80-100	10	
1630	End of Day 20yd Dump #2	5	2	84	80-100	10	
	NA						

COMMENTS: Debris was direct frisked prior to loading each truck per survey plan. Smears were taken at end of day.

FOLLOW UP REQUIRED? YES ☐ NO ☑ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada

RADIATION SURVEY REPORT

Number 02-ER-TTR-03 Page 1 of 2

RCT(S): R PARKE	SIGNATURE: R Parke	DATE: 7-16-02	
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN	1 & 2	COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	3	INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT USED IN COLUMN	N / A	INSTRUMENT USED IN COLUMN	N / A
L2929	155582			Model 101	46554				
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN	4	COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
EFFICIENCY 33%	EFFICIENCY 41%	EFFICIENCY N/A	EFFICIENCY	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER
MDA 12	MDA 79	MDA	MDA A	Bicron	C566E				
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO		COLUMN 1 α☒ β☐ γ☐ OTHER	COLUMN 2 α☐ β☒ γ☐ OTHER	COLUMN 3 α☐ β☒ γ☒ OTHER	COLUMN 4 α☐ β☒ γ☒ OTHER
COUNT TIME 1min	COUNT TIME 1min	COUNT TIME							

PURPOSE: Debris Removal from CAU-425 to TTR Dump

			COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
			UNIT spm/100cm²	UNIT spm/100cm²	UNIT cpm/probe	UNIT μR/hr	UNIT
			FIXED + REMOVE ☐ SWIPE ☑ N/A ☐	FIXED + REMOVE ☐ SWIPE ☑ N/A ☐	FIXED + REMOVE ☑ SWIPE ☐ N/A ☐	FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
TIME	DESCRIPTION OF SURVEY	No. of Points					
0720	**BACKGROUND** (Gross)	NA	0.2	75	120-150	10-15	
1000	First Truck load		NA	NA	120-150	10-15	
1030	Second Truck load		NA	NA	120-150	10-15	
1120	Third Truck load		NA	NA	120-150	10-15	A
1130	Fourth Truck load		NA	NA	120-150	10-15	N
1330	Fifth Truck load		NA	NA	120-150	10-15	
1400	Sixth Truck load		NA	NA	120-150	10-15	
1445	Seventh Truck load		NA	NA	120-150	10-15	
1515	Eighth Truck load		NA	NA	120-150	10-15	
1545	Ninth Truck load		NA	NA	120-150	10-15	
1600	Tenth Truck load		NA	NA	120-150	10-15	
1615	Eleventh Truck load		NA	NA	120-150	10-15	

COMMENTS: Debris surveyed prior to loading trucks per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada — **RADIATION SURVEY REPORT** Number 02-ER-TTR-03 Page 2 of 2

RCT(S):	SIGNATURE:	DATE:
R. Parke	R. Parke	7-16-02

HEALTH PHYSICIST:	SUPERVISOR:	EVENT/ RWP NO:	PROJECT / WORK ORDER:
Doug McBride		NA	CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1+2	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN 3	INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN	
INSTRUMENT L2929 NUMBER 155582	INSTRUMENT NUMBER	INSTRUMENT Model 101 NUMBER 46554	INSTRUMENT USED IN COLUMN N A	INSTRUMENT USED IN COLUMN N A	
ALPHA EFFICIENCY 33% / BETA EFFICIENCY 41%	ALPHA EFFICIENCY N / BETA EFFICIENCY A	COUNTING EQUIPMENT USED IN COLUMN 4	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN	
MDA 12 / MDA 79	MDA / MDA	INSTRUMENT Bicron NUMBER C564E	INSTRUMENT NUMBER	INSTRUMENT NUMBER	
CONVERSION FACTOR 3.03 / CONVERSION FACTOR 2.4	CONVERSION FACTOR / CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO			
COUNT TIME 1 min / 1 min	COUNT TIME				

PURPOSE: Debris Removal From CAU-425 to TTR dump

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Type	α ☒ β ☐ γ ☐ OTHER	α ☐ β ☒ γ ☐ OTHER	α ☐ β ☒ γ ☒ OTHER	α ☐ β ☐ γ ☒ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/100cm²	cpm/100cm²	cpm/probe	µR/hr	
FIXED + REMOVE	☐	☐	☒	☒	☐
SWIPE	☒	☒	☐	☐	☐
N/A	☐	☐	☐	☐	☐

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
0720	**BACKGROUND** (Gross)	NA	0.2	75	120-150	10-15	
1630	Twelveth Truck load	NA	NA	NA	120-150	10-15	
1640	Front Loader	10	1	86	60-90	10	
|	Truck #1	5	2	88	80-100	10	
|	Truck #2	5	1	88	80-100	10	N A
1700	Truck #3	5	2	85	80-100	10	
	N A						

COMMENTS: Debris surveyed prior to loading trucks per survey plan. Loader + Trucks surveyed at end of day.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada RADIATION SURVEY REPORT

Number 02-ER-TTR-05 Page 1 of 1

RCT(S): R. PARKE	SIGNATURE: R. Parke	DATE: 7-17-02

HEALTH PHYSICIST: Doug McBride	SUPERVISOR: [signature]	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1		COUNTING EQUIPMENT USED IN COLUMN 2		INSTRUMENT USED IN COLUMN 3 + 4	INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT Model 101	NUMBER 46554	INSTRUMENT Bicron	NUMBER C566E	INSTRUMENT Electra NUMBER 4384	INSTRUMENT USED IN COLUMN N/A	INSTRUMENT USED IN COLUMN N/A
ALPHA EFFICIENCY	BETA EFFICIENCY	ALPHA EFFICIENCY	BETA EFFICIENCY	COUNTING EQUIPMENT USED IN COLUMN N/A	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
MDA N/A	MDA	MDA N/A	MDA	INSTRUMENT NUMBER	INSTRUMENT NUMBER	INSTRUMENT NUMBER
CONVERSION FACTOR	CONVERSION FACTOR	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☐ YES ☒ NO		
COUNT TIME		COUNT TIME				

PURPOSE: Discovery + Clean-up of DU

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	α ☐ β ☒ γ ☒ OTHER	α ☐ β ☐ γ ☒ OTHER	α ☒ β ☐ γ ☐ OTHER	α ☐ β ☒ γ ☐ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/probe	μR/hr	dpm/100cm²	dpm/100cm²	
FIXED + REMOVE	☒	☒	☒	☒	☐
SWIPE	☐	☐	☐	☐	☐
N/A	☐	☐	☐	☐	☐

TIME	DESCRIPTION OF SURVEY	No. of Points	Column 1	Column 2	Column 3	Column 4	Column 5
0800	**BACKGROUND** (Gross)	NA	120-150	10	11	1662	
1030	First time discovery of DU at CAU-425	NA	7,500,000	10	2500	800,000	
1100	8-7-02 + 8-8-02 Final removal	NA	3000	10	NA	NA	
	N/A						N/A

COMMENTS: DU first discovered on 7-17-02, area posted RMA and returned to later for clean up. Approx. 5 gal of dirt packaged with levels from 300 cpm/probe to 800,000 dpm/100cm²

FOLLOW UP REQUIRED? YES ☐ NO ☒ ~~ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED~~ RZP 8-8-02

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RADIATION SURVEY REPORT

Number 02-EA-TTR-06 Page 1 of 2

RCT(S): R. PARKE	SIGNATURE: R. Parke	DATE: 7-16-02	
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1+2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3		INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Ficron	NUMBER C5616E	INSTRUMENT USED IN COLUMN N/A		INSTRUMENT USED IN COLUMN N/A	
ALPHA EFFICIENCY 33%	BETA EFFICIENCY 41%	ALPHA EFFICIENCY N/A	BETA EFFICIENCY	COUNTING EQUIPMENT USED IN COLUMN 4		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
MDA 8	MDA 80	MDA	MDA	INSTRUMENT Model 101	NUMBER 46554	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO					
COUNT TIME 1min	COUNT TIME 1min	COUNT TIME							

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER	COLUMN 2 α☐ β☒ γ☐ OTHER	COLUMN 3 α☐ β☑ γ☒ OTHER	COLUMN 4 α☐ β☒ γ☒ OTHER	COLUMN 5 α☐ β☐ γ☐ OTHER
			UNIT cpm/100cm² FIXED+ ☐ REMOVE ☐ SWIPE ☒ N/A ☐	UNIT cpm/100cm² FIXED+ ☐ REMOVE ☐ SWIPE ☑ N/A ☐	UNIT μR/hr FIXED+ ☐ REMOVE ☐ SWIPE ☐ N/A ☐	UNIT cpm/probe FIXED+ ☐ REMOVE ☐ SWIPE ☐ N/A ☐	UNIT FIXED+ ☐ REMOVE ☐ SWIPE ☐ N/A ☐
0700	**BACKGROUND** (Gross)	NA	0	76	10-15	120-140	
0815	Truck load #1		NA	NA			
	#2						
	#3						NA
	#4						
	#5						
	#6						
	#7						
	#8						
	#9						
	#10						
1400	#11				10-15	120-140	

COMMENTS: Truck loads surveyed prior to being loaded per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada — RADIATION SURVEY REPORT

Number 02-ER-TTR-06 Page 2 of 2

RCT(S): R. PARKE

SIGNATURE: R. Parke

DATE: 7-18-02

HEALTH PHYSICIST: Doug McBride

SUPERVISOR:

EVENT/ RWP NO: NA

PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN	1 & 2	COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	3	INSTRUMENT USED IN COLUMN	
INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT USED IN COLUMN	
L2929	155582			Bicron	C5616F	COUNTING EQUIPMENT USED IN COLUMN	
ALPHA EFFICIENCY	BETA EFFICIENCY	ALPHA EFFICIENCY	BETA EFFICIENCY	COUNTING EQUIPMENT USED IN COLUMN	4	INSTRUMENT	NUMBER
33%	41%	N/A	N/A	INSTRUMENT	NUMBER		
MDA	MDA	MDA	MDA	Model 101	46554		
8	80						
CONVERSION FACTOR	CONVERSION FACTOR	CONVERSION FACTOR	CONVERSION FACTOR				
3.03	2.4						
COUNT TIME		COUNT TIME					
1min	1min						

ALL READINGS MEET UNRESTRICTED

RELEASE LIMITS? ☒ YES ☐ NO

PURPOSE: Debris Removal from CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER	COLUMN 2 α☐ β☒ γ☐ OTHER	COLUMN 3 α☐ β☒ γ☒ OTHER	COLUMN 4 α☐ β☒ γ☒ OTHER	COLUMN 5 α☐ β☐ γ☐ OTHER
			UNIT cpm/100cm² FIXED + REMOVE☐ SWIPE☒ N/A☐	UNIT cpm/100cm² FIXED + REMOVE☐ SWIPE☒ N/A☐	UNIT μR/hr FIXED + REMOVE☒ SWIPE☐ N/A☐	UNIT cpm/probe FIXED + REMOVE☒ SWIPE☐ N/A☐	UNIT FIXED + REMOVE☐ SWIPE☐ N/A☐
0700	**BACKGROUND** (Gross)	NA	0	76	10-15	120-140	
1500	Front Loader	10	6	92	10	80-100	
1	Truck # 1	5	7	99	10	80-100	
1530	Truck # 2	5	2	86	10	80-100	
							N/A

COMMENTS: Loader and trucks surveyed at end of day.
Truck # 3 to be surveyed Mon. prior to start of work due to weather.

FOLLOW UP REQUIRED? YES ☐ NO ☒

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Bechtel Nevada

RADIATION SURVEY REPORT

Number 02-ER-11R-04 Page 1 of 2

RCT(S): R. PARKE		SIGNATURE: R. Parke	DATE: 7-17-02
HEALTH PHYSICIST: Doug McReide	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN	1 + 2	COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	3	INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT USED IN COLUMN	N	INSTRUMENT USED IN COLUMN	N/A
1 2929	155582			Ludlum 101	46554	COUNTING EQUIPMENT USED IN COLUMN	4	INSTRUMENT USED IN COLUMN	
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN	4	COUNTING EQUIPMENT USED IN COLUMN	A	INSTRUMENT	NUMBER
EFFICIENCY 33%	EFFICIENCY 41%	EFFICIENCY N/A	EFFICIENCY N/A	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER		
MDA 12	MDA 74	MDA	MDA	Bicron	C5616				
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO					
COUNT TIME 1 min	COUNT TIME 1 min	COUNT TIME							

PURPOSE: Debris Removal For CAU-425 to TTR Dump

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	α ☑ β ☐ γ ☐ OTHER	α ☐ β ☑ γ ☐ OTHER	α ☐ β ☐ γ ☑ OTHER	α ☐ β ☐ γ ☐ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/100 cm²	cpm/100 cm²	cpm/probe	mR/hr	UNIT
	FIXED + ☐ REMOVE ☐ SWIPE ☑ N/A ☐	FIXED + ☐ REMOVE ☐ SWIPE ☑ N/A ☐	FIXED + ☐ REMOVE ☑ SWIPE ☐ N/A ☐	FIXED + ☐ REMOVE ☑ SWIPE ☐ N/A ☐	FIXED + ☐ REMOVE ☐ SWIPE ☐ N/A ☐

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
0710	**BACKGROUND** (Gross)	NA	12	73	120-150	10-15	
0830	Truck load #1		NA	NA			
	#2						
	#3						
	#4						A
	#5						N
	#6						
	#7						
	#8						
	#9						
	#10						
1430	#11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads of debris surveyed prior to loading trucks per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☑ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT

Number 02-FR-TTR-04 Page 2 of 2

RCT(S):	SIGNATURE:	DATE:
R. PARKE	R. Parke	7-17-02

HEALTH PHYSICIST:	SUPERVISOR:	EVENT/ RWP NO:	PROJECT / WORK ORDER:
Doug McBride		N/A	CAU-425

COUNTING EQUIPMENT USED IN COLUMN	1 + 2	COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	3	INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT	L2929	NUMBER	155582	INSTRUMENT	NUMBER	INSTRUMENT	Model 101	NUMBER	46554	INSTRUMENT USED IN COLUMN	N/A	INSTRUMENT USED IN COLUMN	N/A
ALPHA EFFICIENCY	33%	BETA EFFICIENCY	41%	ALPHA EFFICIENCY	N/A	BETA EFFICIENCY		COUNTING EQUIPMENT USED IN COLUMN	4	COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
MDA	12	MDA	78	MDA		MDA		INSTRUMENT	Ficon	NUMBER	C566E	INSTRUMENT	NUMBER
CONVERSION FACTOR	3.03	CONVERSION FACTOR	2.4	CONVERSION FACTOR		CONVERSION FACTOR		ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO					
COUNT TIME	1 min	COUNT TIME	1 min	COUNT TIME									

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER UNIT cpm/100cm² FIXED + ☐ REMOVE ☐ SWIPE ☑ N/A ☐	COLUMN 2 α☐ β☑ γ☐ OTHER UNIT cpm/100cm² FIXED + ☐ REMOVE ☐ SWIPE ☑ N/A ☐	COLUMN 3 α☐ β☒ γ☒ OTHER UNIT cpm/probe FIXED + ☒ REMOVE ☐ SWIPE ☐ N/A ☐	COLUMN 4 α☐ β☑ γ☑ OTHER UNIT MR/hr FIXED + ☑ REMOVE ☐ SWIPE ☐ N/A ☐	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED + ☐ REMOVE ☐ SWIPE ☐ N/A ☐
0710	**BACKGROUND** (Gross)	NA	0.2	73	120-150	10-15	
1430	Truck load # 12	|	NA	NA	120-150	10-15	
|	# 13	|	NA	NA	120-150	10-15	
|	# 14	NA	NA	NA	120-150	10-15	
1630	Front Loader	10	2	95	80-100	10	A
|	Truck # 1	5	3	92	80-100	10	N
|	Truck # 2	5	0	82	80-100	10	
1700	Truck # 3	5	1	83	80-100	10	
	A						
	N						

COMMENTS: Truck loads of debris surveyed prior to loading trucks per survey plan. Loader and trucks surveyed at end of day.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT

Number 02-FP-110-07 Page 1 of 2

RCT(S): R. PARKE	SIGNATURE: R Parke	DATE: 7-22-02

HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1+2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3	INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101 NUMBER 46554	INSTRUMENT USED IN COLUMN N A	INSTRUMENT USED IN COLUMN N A
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN 4	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
EFFICIENCY 32%	EFFICIENCY 41%	EFFICIENCY N	EFFICIENCY	INSTRUMENT Bicron NUMBER C566F	INSTRUMENT NUMBER	INSTRUMENT NUMBER
MDA 11	MDA 79	MDA	MDA A			
CONVERSION FACTOR 3.12	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO		
COUNT TIME 1 min	1 min	COUNT TIME				

PURPOSE: Debris Removal From CAU-425 to TTR Dump

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	α ☑ β ☐ γ ☐ OTHER	α ☐ β ☑ γ ☐ OTHER	α ☐ β ☑ γ ☑ OTHER	α ☐ β ☑ γ ☑ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/100cm^2	cpm/100cm^2	cpm/probe	uR/hr	
FIXED + REMOVE	☐	☐	☑	☑	☐
SWIPE	☑	☑	☐	☐	☐
N/A	☐	☐	☐	☐	☐

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
0715	**BACKGROUND** (Gross)	NA	0.1	72	120-150	10-15	
	Truck load #1		NA	NA			
	#2						
	#3						
	#4						
	#5						N A
	#6						
	#7						
	#8						
	#9						
	#10						
	#11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads surveyed prior to loading; loads surveyed per survey plan

FOLLOW UP REQUIRED? YES ☐ NO ☑

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RCT(S): R. PARKE | SIGNATURE: R Parke | DATE: 7-22-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/ RWP NO: NA | PROJECT / WORK ORDER: CAU-425

PURPOSE: Debris Removal From CAU-425 to TTR dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER UNIT cpm/100cm² FIXED ☐ REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 2 α☐ β☒ γ☐ OTHER UNIT cpm/100cm² FIXED ☐ REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 3 α☐ β☒ γ☒ OTHER UNIT cpm/probe FIXED ☐ REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 4 α☐ β☒ γ☒ OTHER UNIT mR/hr FIXED ☐ REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED ☐ REMOVE ☐ SWIPE ☐ N/A ☐
0715	BACKGROUND (Gross)	NA	0.1	72	120-150	10-15	
	Truck load #12		NA	NA	120-150	10-15	
	#13				120-150	10-15	
	#14				120-150	10-15	
	#15	NA	NA	NA	120-150	10-15	
1615	End of Day Front Loader	10	2	85	80-100	10	A
|	Truck #1	5	3	82	60-80	10	N
|	#2	5	2	76	60-80	10	
1700	#3	5	2	87	60-80	10	
							A
							N

COMMENTS: Loader and truck surveyes performed at end of shift.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT

Number 02-ER-TTR-08 Page 1 of 2

RCT(S): R. PARKE	SIGNATURE: R. Parke	DATE: 7-23-02	
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: N A	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1 + 2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3		INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101	NUMBER 46554	INSTRUMENT USED IN COLUMN N/A		INSTRUMENT USED IN COLUMN N/A	
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN 4		COUNTING EQUIPMENT USED		INSTRUMENT USED IN COLUMN	
EFFICIENCY 32%	EFFICIENCY 41%	EFFICIENCY N/A	EFFICIENCY	INSTRUMENT Bicron	NUMBER C5616E	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER
MDA 11	MDA 78	MDA	MDA						
CONVERSION FACTOR 3.12	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO					
COUNT TIME 1 min	COUNT TIME 1 min	COUNT TIME							

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	α ☑ β ☐ γ ☐ OTHER	α ☐ β ☑ γ ☐ OTHER	α ☐ β ☑ γ ☑ OTHER	α ☐ β ☑ γ ☑ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/100cm²	cpm/100cm²	cpm/probe	MR/hr	UNIT
FIXED +	☐	☐	☐	☐	☐
REMOVE	☐	☐	☒	☒	☐
SWIPE	☑	☑	☐	☐	☐
N/A	☐	☐	☐	☐	☐

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
0715	**BACKGROUND** (Gross)	NA	0.2	72	120-150	10-15	
	Truck load # 1		NA	NA			
	# 2						
	# 3						N A
	# 4						
	# 5						
	# 6						
	# 7						
	# 8						
	# 9						
	# 10						
	# 11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads surveyed prior to loading truck. Survey performed per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RCT(S): R. PARKE | SIGNATURE: R. Parke | DATE: 7-23-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/ RWP NO: NA | PROJECT / WORK ORDER: CAU-425

PURPOSE: Debris Removal from CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 2 α☐ β☒ γ☐ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 3 α☐ β☒ γ☒ OTHER UNIT cpm/probe FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 4 α☐ β☒ γ☒ OTHER UNIT MR/hr FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0715	BACKGROUND (Gross)	NA	0.2	72	120-150	10-15	
1300	Truck load # 12		NA	NA			
	# 13						
	# 14						
	# 15						
	# 16						A
1600	# 17	NA	NA	NA	120-150	10-15	N
1630	End of Day Front Loader	10	1	93	80-140	10	
	Truck # 1	5	3	79	80-100	10	
	Truck # 2	5	0	68	80-100	10	
1710	Truck # 3	5	1	71	80-100	10	
	A						
	N						

COMMENTS: Loader & Trucks surveyed at end of day.

FOLLOW UP REQUIRED? YES☐ NO☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Number 02-FR-TTR-09 Page 1 of 2

RCT(S): R. Parke	SIGNATURE: R. Parke	DATE: 7-24-02	
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN: 1 + 2		COUNTING EQUIPMENT USED IN COLUMN:		INSTRUMENT USED IN COLUMN: 3		INSTRUMENT USED IN COLUMN:	INSTRUMENT USED IN COLUMN:
INSTRUMENT: L2929	NUMBER: 155582	INSTRUMENT:	NUMBER:	INSTRUMENT: Mod. 1 Ion	NUMBER: 46554	INSTRUMENT USED IN COLUMN: N/A	INSTRUMENT USED IN COLUMN: N/A
ALPHA EFFICIENCY: 33%	BETA EFFICIENCY: 41%	ALPHA EFFICIENCY: N/A	BETA EFFICIENCY:	COUNTING EQUIPMENT USED IN COLUMN: 4		COUNTING EQUIPMENT USED IN COLUMN:	INSTRUMENT USED IN COLUMN:
MDA: 11	MDA: 78	MDA:	MDA:	INSTRUMENT: Ricem	NUMBER: C566E	INSTRUMENT:	NUMBER:
CONVERSION FACTOR: 3.03	CONVERSION FACTOR: 24	CONVERSION FACTOR:	CONVERSION FACTOR:	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO			
COUNT TIME: 1 min	COUNT TIME: 1 min	COUNT TIME:					

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☐ β☐ γ☐ OTHER	COLUMN 2 α☐ β☑ γ☐ OTHER	COLUMN 3 α☐ β☑ γ☐ OTHER	COLUMN 4 α☐ β☐ γ☑ OTHER	COLUMN 5 α☐ β☐ γ☐ OTHER
			UNIT: ~~cpm/100cm²~~ FIXED+ ☐ REMOVE ☐ SWIPE ☑ N/A ☐	UNIT: ~~cpm/100cm²~~ FIXED+ ☐ REMOVE ☐ SWIPE ☑ N/A ☐	UNIT: ~~cpm/probe~~ FIXED+ ☑ REMOVE ☐ SWIPE ☐ N/A ☐	UNIT: ~~dpm/hr~~ FIXED+ ☑ REMOVE ☑ SWIPE ☐ N/A ☐	UNIT: FIXED+ ☐ REMOVE ☐ SWIPE ☐ N/A ☐
0720	**BACKGROUND** (Gross)	NA	0.1	73	120-150	10-15	
	Truck load #1		NA	NA			
	#2						A
	#3						N
	#4						
	#5						
	#6						
	#7						
	#8						
	#9						
	#10						
	#11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads surveyed prior to loading, Survey performed per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☑ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RCT(S): R. PARKE | SIGNATURE: R. Parke | DATE: 7-24-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/RWP NO: NA | PROJECT/WORK ORDER: CAU-425

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 2 α☐ β☒ γ☐ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 3 α☐ β☒ γ☒ OTHER UNIT cpm/probe FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 4 α☐ β☒ γ☒ OTHER UNIT µR/hr FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0720	BACKGROUND (Gross)	NA	0.1	73	0-150	10-15	
	End of Day Loader	10	3	95	60-80	10	
	Truck #1	5	3	88	60-80	10	
	Truck #2	5	2	89	60-80	10	
	Truck #3	5	1	89	60-80	10	
							A
							N
						A	
						N	

COMMENTS: Loader & Trucks surveyed at end of day.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada **RADIATION SURVEY REPORT** Number 02-ER-TTR-10 Page 1 of 2

RCT(S): R. PARKE		SIGNATURE: R. Parke	DATE: 7-25-02
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1 + 2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3	INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101 NUMBER 46554	INSTRUMENT USED IN COLUMN N/A	INSTRUMENT USED IN COLUMN N/A
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN 4	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
EFFICIENCY 33%	EFFICIENCY 41%	EFFICIENCY N/	EFFICIENCY	INSTRUMENT Bicron NUMBER C566E	INSTRUMENT NUMBER	INSTRUMENT NUMBER
MDA 11	MDA 76	MDA	MDA A			
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO		
COUNT TIME 1 min	1 min	COUNT TIME				

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α ☒ β ☐ γ ☐ OTHER; UNIT cpm/100cm²; FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 2 α ☐ β ☒ γ ☐ OTHER; UNIT cpm/100cm²; FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 3 α ☐ β ☒ γ ☒ OTHER; UNIT cpm/probe; FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 4 α ☐ β ☑ γ ☑ OTHER; UNIT uR/hr; FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 5 α ☐ β ☐ γ ☐ OTHER; UNIT; FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0710	**BACKGROUND** (Gross)	NA	0.1	68	120-150	10-15	
	Truck load #1		NA	NA			
	#2						
	#3						
	#4						NA
	#5						
	#6						
	#7						
	#8						
	#9						
	#10						
	#11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads surveyed prior to loading. survey performed per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT
(SUPPLEMENT)

Number 02-ER-TTR-10 Page 2 of 2

RCT(S): R. Parke | SIGNATURE: R. Parke | DATE: 7-25-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/RWP NO: NA | PROJECT/WORK ORDER: CAU-425

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 2 α☐ β☒ γ☐ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 3 α☐ β☒ γ☐ OTHER UNIT cpm/probe FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 4 α☐ β☒ γ☒ OTHER UNIT μR/hr FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0710	BACKGROUND (Gross)	NA	0.1	68	120-150	10-15	
	Truck load # 12		NA	NA			
	# 13						
	# 14						
	# 15						
	# 16	NA	NA	NA	120-150 ~~60-100~~	10-15	
1600	End of Day Loader	10	1	78	80-100	10	NA
	Truck # 1	5	1	90	60-80	10	
	Truck # 2	5	0	78	60-80	10	
1630	Truck # 3	5	1	86	60-80	10	
			A				
			N				

COMMENTS: Loader + Trucks surveyed at end of day.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT

Number 02-ER-TTR-11 Page 1 of 2

RCT(S): R. PARKE	SIGNATURE: R Parke	DATE: 7-29-02

HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

Counting equipment used in column 1+2

INSTRUMENT	NUMBER
L2929	155582

	ALPHA	BETA
EFFICIENCY	33%	41%
MDA	11	77
CONVERSION FACTOR	3.03	2.4
COUNT TIME	1min	1min

Counting equipment used in column: (lined through; efficiency N/A)

Instrument used in column 3 — Instrument: Model 101, Number: 46554

Counting equipment used in column 4 — Instrument: Bicron, Number: C566E

Instrument used in column: N/A (other blocks lined through)

ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO

PURPOSE: Debris Removal From CAU-425 to TTR Dump

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Type	α ☒ β ☐ γ ☐	α ☐ β ☒ γ ☐	α ☐ β ☒ γ ☒	α ☐ β ☐ γ ☒	α ☐ β ☐ γ ☐
UNIT	cpm/100cm²	cpm/100cm²	cpm/Probe	uR/hr	
FIXED + REMOVE	☐	☐	☒	☒	☐
SWIPE	☒	☒	☐	☐	☐
N/A	☐	☐	☐	☐	☐

TIME	DESCRIPTION OF SURVEY	No. of Points	Column 1	Column 2	Column 3	Column 4	Column 5
0715	**BACKGROUND** (Gross)	NA	0.1	71	120-150	10-15	
	Truck load #1		NA	NA			
	#2						
	#3						
	#4						NA
	#5						
	#6						
	#7						
	#8						
	#9						
	#10						
	#11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads surveyed prior to loading, truck loads surveyed per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒

ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada **RADIATION SURVEY REPORT** (SUPPLEMENT) Number 02-ER-TTR-11 Page 2 of 2

RCT(S): R. PARKE | SIGNATURE: R. Parke | DATE: 7-29-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/ RWP NO: NA | PROJECT / WORK ORDER: CAU-425

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 αβγ OTHER UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 2 αβγ OTHER UNIT cpm/Nam³ FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	COLUMN 3 αβγ OTHER UNIT cpm/probe FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 4 αβγ OTHER UNIT MR/hr FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	COLUMN 5 αβγ OTHER UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0715	BACKGROUND (Gross)	NA	0.1	71	120-150	10-15	
	Truck load # 12		NA	NA			
	# 13						
	# 14						
	# 15						
	# 16	NA	NA	NA	120-150	10-15	N A
1600	End of Day Loader	10	1	~~NA~~ 81	80-100	10	
	Truck # 1	5	1	83	60-80	10	
	Truck # 2	5	1	84	60-80	10	
1635	Truck # 3	5	1	77	60-80	10	

A
N

COMMENTS: Loader & Trucks surveyed at end of day per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada RADIATION SURVEY REPORT Number 02-FR-TTR-12 Page 1 of 2

RCT(S): R. PARKE			SIGNATURE: R. Parke	DATE: 7-30-02
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA		PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1 & 2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3	INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT 12929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101 NUMBER 46554	INSTRUMENT USED IN COLUMN NA	INSTRUMENT USED IN COLUMN NA
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN 4	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
EFFICIENCY 33%	EFFICIENCY 41%	EFFICIENCY N	EFFICIENCY A	INSTRUMENT Bicron NUMBER C566E	INSTRUMENT NUMBER	INSTRUMENT NUMBER
MDA 13	MDA 78	MDA	MDA			
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO		
COUNT TIME 1 min	1 min	COUNT TIME				

PURPOSE: Debris Removal From CAU-425 to TTR Dump

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	α ☒ β ☐ γ ☐ OTHER	α ☐ β ☒ γ ☐ OTHER	α ☐ β ☒ γ ☒ OTHER	α ☐ β ☒ γ ☒ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/100cm²	cpm/100cm²	cpm/probe	μR/hr	
FIXED + REMOVE	☐	☐	☒	☒	☐
SWIPE	☒	☒	☐	☐	☐
N/A	☐	☐	☐	☐	☐

TIME	DESCRIPTION OF SURVEY	No. of Points	Column 1	Column 2	Column 3	Column 4	Column 5
0720	**BACKGROUND** (Gross)	NA	0.3	73	120-150	10-15	
	Truck load #1		NA	NA			
	#2						
	#3						NA
	#4						
	#5						
	#6						
	#7						
	#8						
	#9						
	#10						
	#11	NA	NA	NA	120-150	10-15	

COMMENTS: Truck loads surveyed prior to loading, loads surveyed per survey plan.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RCT(S): R. PARKE | SIGNATURE: R. Parke | DATE: 7-30-02

HEALTH PHYSICIST: Doug McBride | SUPERVISOR: | EVENT/ RWP NO: NA | PROJECT / WORK ORDER: CAU-425

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 αX βO γO OTHER UNIT cpm/100cm² FIXED + REMOVE O SWIPE X N/A O	COLUMN 2 αO βX γO OTHER UNIT cpm/100cm² FIXED + REMOVE O SWIPE X N/A O	COLUMN 3 αO βX γO OTHER UNIT cpm/probe FIXED + REMOVE X SWIPE O N/A O	COLUMN 4 αO βX γX OTHER UNIT MR/hr FIXED + REMOVE X SWIPE O N/A O	COLUMN 5 αO βO γO OTHER UNIT FIXED + REMOVE O SWIPE O N/A O
0720	BACKGROUND (Gross)	NA	0.3	73	120-150	10-15	
	Truck load #12	|	NA	NA	|	|	
	#13	|	|	|	|	|	
	#14	NA	NA	NA	120-150	10-15	
1610	End of Day Loader	10	2	87	80-100	10	
|	Truck #1	5	3	83	60-80	10	N A
|	Truck #2	5	1	88	60-80	10	
1640	Truck #3	5	2	82	60-80	10	

A
N

COMMENTS: Loader + Trucks surveyed at end of day survey performed per survey plan

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT

Number 02-ER-TTR-14 Page 1 of 1

RCT(S): R. Parke	SIGNATURE: R. Parke	DATE: 7-31-02

HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1 + 2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3	INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101 NUMBER 46554	INSTRUMENT USED IN COLUMN N A	INSTRUMENT USED IN COLUMN N A
ALPHA EFFICIENCY 32%	BETA EFFICIENCY 41%	ALPHA EFFICIENCY N	BETA EFFICIENCY A	COUNTING EQUIPMENT USED IN COLUMN 4	COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
MDA 13	MDA 79	MDA	MDA	INSTRUMENT Bicron NUMBER C566F	INSTRUMENT NUMBER	INSTRUMENT NUMBER
CONVERSION FACTOR 3.12	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO		
COUNT TIME 1min	1min	COUNT TIME				

PURPOSE: Debris Removal from CAU-425 to TTR Dump

	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
Type	α ☒ β ☐ γ ☐ OTHER	α ☐ β ☒ γ ☐ OTHER	α ☐ β ☒ γ ☒ OTHER	α ☐ β ☒ γ ☒ OTHER	α ☐ β ☐ γ ☐ OTHER
UNIT	cpm/100cm²	cpm/100cm²	cpm/probe	µR/hr	
FIXED + REMOVE	☐	☐	☒	☒	☐
SWIPE	☒	☒	☐	☐	☐
N/A	☐	☐	☐	☐	☐

TIME	DESCRIPTION OF SURVEY	No. of Points	Column 1	Column 2	Column 3	Column 4	Column 5
0720	**BACKGROUND** (Gross)	NA	0.2	75	120-150	10-15	
	Truck load #1	NA	NA	NA	120-150	10-15	
	#2	NA	NA	NA	120-150	10-15	
1600	End of Day Loader	10	1	83	30-100	10	
|	Truck #1	5	1	75	60-80	10	N A
1635	Truck #2	5	1	84	60-80	10	
	N A						

COMMENTS: Truck loads surveyed prior to loading, loads surveyed per survey plan. Loader & trucks surveyed at end of day, Truck #3 surveyed for release earlier.

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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Bechtel Nevada — RADIATION SURVEY REPORT

Number 02-TR-TTR-15 Page 1 of 1

RCT(S): R. PARKE	SIGNATURE: R. Parke	DATE: 3-1-02	
HEALTH PHYSICIST: Dave McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1 & 2		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN 3		INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT	NUMBER	INSTRUMENT Model 101	NUMBER 46554	INSTRUMENT USED IN COLUMN N/A	INSTRUMENT USED IN COLUMN N/A
ALPHA EFFICIENCY 33%	BETA EFFICIENCY 41%	ALPHA EFFICIENCY N/A	BETA EFFICIENCY	COUNTING EQUIPMENT USED IN COLUMN 4		COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
MDA 11	MDA 77	MDA	MDA	INSTRUMENT Bicron	NUMBER C566F	INSTRUMENT NUMBER	INSTRUMENT NUMBER
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO			
COUNT TIME 1min	COUNT TIME 1min	COUNT TIME					

PURPOSE: Debris Removal From CAU-425 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☑ β☐ γ☐ OTHER UNIT c/m/100cm² FIXED + REMOVE ☐ SWIPE ☑ N/A ☐	COLUMN 2 α☐ β☑ γ☐ OTHER UNIT c/m/100cm² FIXED + REMOVE ☐ SWIPE ☑ N/A ☐	COLUMN 3 α☐ β☑ γ☑ OTHER UNIT c/m/probe FIXED + REMOVE ☑ SWIPE ☐ N/A ☐	COLUMN 4 α☐ β☑ γ☑ OTHER UNIT µR/hr FIXED + REMOVE ☑ SWIPE ☐ N/A ☐	COLUMN 5 α☐ β☐ γ☐ OTHER UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0710	**BACKGROUND** (Gross)	NA	0.1	70	120-150	10-15	
	Truck load #1		NA	NA			
	#2						
	#3						
	#4			NA			N/A
	#5	NA	NA	NA	120-150	10-15	
1545	End of Day Loader	10	1	82	80-100	10	
	Backhoe	10	1	90	60-90	10	
	Truck #1	5	2	85	60-90	10	
1625	Truck #2	5	1	80	60-90	10	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	

COMMENTS: Truck loads surveyed prior to loading, loads surveyed per survey plan. Vehicles surveyed at end of day

FOLLOW UP REQUIRED? YES ☐ NO ☑ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

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RADIATION SURVEY REPORT

Number 02-ER-TTR-17 Page 1 of 1

RCT(S): R. Parke	SIGNATURE: R. Parke	DATE: 8-6-02	
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: NA	PROJECT / WORK ORDER: CAU-425

COUNTING EQUIPMENT USED IN COLUMN 1 + 2		COUNTING EQUIPMENT USED IN COLUMN 3		INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
INSTRUMENT L2929	NUMBER 155582	INSTRUMENT Model 101	NUMBER 46554	INSTRUMENT N/A		INSTRUMENT USED IN COLUMN N/A	INSTRUMENT USED IN COLUMN N/A
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN		COUNTING EQUIPMENT USED IN COLUMN	INSTRUMENT USED IN COLUMN
EFFICIENCY 33 %	EFFICIENCY 41 %	EFFICIENCY	EFFICIENCY	INSTRUMENT	NUMBER	INSTRUMENT NUMBER	INSTRUMENT NUMBER
MDA 8	MDA 76	MDA N/A	MDA N/A				
CONVERSION FACTOR 3.03	CONVERSION FACTOR 2.4	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☒ YES ☐ NO			
COUNT TIME 1min	COUNT TIME 1min	COUNT TIME					

PURPOSE: Remove Instruments from RMA

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☑ β☐ γ☐ OTHER	COLUMN 2 α☐ β☒ γ☐ OTHER	COLUMN 3 α☑ β☒ γ☒ OTHER	COLUMN 4 α☐ β☐ γ☐ OTHER	COLUMN 5 α☐ β☐ γ☐ OTHER
			UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☒ N/A ☐	UNIT cpm/100cm² FIXED + REMOVE ☐ SWIPE ☐ N/A ☐	UNIT cpm/probe FIXED + REMOVE ☒ SWIPE ☐ N/A ☐	UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐	UNIT FIXED + REMOVE ☐ SWIPE ☐ N/A ☐
0720	**BACKGROUND** (Gross)	NA	0	69	120-150		
1600	Model 101 46554	1	1	88	120-150		
1615	Bicron C566E	1	2	75	120-150		
						N/A	

COMMENTS: N/A

FOLLOW UP REQUIRED? YES ☐ NO ☒ ~~ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED~~ RTP 8-6-02

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RADIATION SURVEY REPORT

Number 02-ER-TTR-16 Page 1 of 1

RCT(S): R. PARKE	SIGNATURE: R. Parke	DATE: 8-6-02	
HEALTH PHYSICIST: Doug McBride	SUPERVISOR:	EVENT/ RWP NO: N/A	PROJECT / WORK ORDER: CAU-125

COUNTING EQUIPMENT USED IN COLUMN 1		COUNTING EQUIPMENT USED IN COLUMN 2		INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
INSTRUMENT: Model 101	NUMBER: 46554	INSTRUMENT: Bicron	NUMBER: C566F	INSTRUMENT: N/A	NUMBER	INSTRUMENT USED IN COLUMN: N/A		INSTRUMENT USED IN COLUMN: N/A	
ALPHA EFFICIENCY	BETA EFFICIENCY	ALPHA EFFICIENCY	BETA EFFICIENCY	COUNTING EQUIPMENT USED IN COLUMN		COUNTING EQUIPMENT USED IN COLUMN		INSTRUMENT USED IN COLUMN	
MDA: N/A	MDA: N/A	MDA: N/A	MDA: N/A	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER	INSTRUMENT	NUMBER
CONVERSION FACTOR	CONVERSION FACTOR	CONVERSION FACTOR	CONVERSION FACTOR	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? ☑ YES ☐ NO					
COUNT TIME		COUNT TIME							

PURPOSE: Remove Debris from CAU-125 to TTR Dump

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☐ β☒ γ☑ OTHER	COLUMN 2 α☐ β☑ γ☑ OTHER	COLUMN 3 α☐ β☐ γ☐ OTHER	COLUMN 4 α☐ β☐ γ☐ OTHER	COLUMN 5 α☐ β☐ γ☑ OTHER
			UNIT: cpm/probe	UNIT: MR/hr	UNIT	UNIT	UNIT
			FIXED + ☑ REMOVE ☐ SWIPE ☐ N/A	FIXED + ☑ REMOVE ☐ SWIPE ☐ N/A	FIXED + ☐ REMOVE ☐ SWIPE ☐ N/A	FIXED + ☐ REMOVE ☐ SWIPE ☐ N/A	FIXED + ☐ REMOVE ☐ SWIPE ☐ N/A
0800	**BACKGROUND** (Gross)	N/A	120-150	10-15			
1100	Truck load # 1	N/A	120-150	10-15			
1400	Truck load # 2	N/A	120-150	10-15			
					N/A	N/A	
			A				
			N				

COMMENTS: All material that was loaded into Trucks From RMA Surveyed prior to loading

FOLLOW UP REQUIRED? YES ☐ NO ☒ ~~ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED~~ RZP 8-6-02

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APPENDIX D

WASTE DISPOSITION DOCUMENTATION

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HAZTRAK ENTRY CONFIRMATION

Off-Site Shipment (From TTR at NEVADA to NTS at NEVADA)

Tracking No: 20020927061552
Carrier: GOVERNMENT TRUCK
Vehicle: 06852
Driver: CHARLES NANCE CDL: [redacted] NV

Depart: 27-SEP-2002 10:30
Threshold: 27-SEP-2002 11:00

Arrival: 27-SEP-2002 16:00
Threshold: 27-SEP-2002 15:00

From: WILLIAM NICOSIA
BECHTEL NEVADA
TONOPAH TEST RANGE
TONOPAH, NV 89049
Area:
Bldg:
Phone: 702/295-4811
Alt Phone:
Pager:

To: STEFAN DUKE
BECHTEL NEVADA
BASE CAMP
MERCURY, NV 89023
Area: 05
Bldg: 5-7
Phone: 702-295-7365
Alt Phone: 702-295-4811
Pager: 702-794-6713

Entered By: NICOSIWC Date Modified: 27-SEP-2002

Shipped Material(s)	Package (s)	Unit(s)	UN/NA	Guide No.
WASTE	1 DRUM (S)	78.00 POUND(S) (GROSS)	2912	162
RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) 7, UN 2912, RADIONUCLIDES:U-234, U-235, U-238 PHYSICAL FORM:SOLID CHEMICAL FORM:OXIDE PACKAGE ACTIVITY:4.9 E+8 BQ CATEGORY:EXCLUSIVE USE SHIPMENT				

24-Hr Emergency Response Number
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Secondary Emergency Response Contact And/Or Comments

PAGE 1 of 1

DEPARTMENT OF ENERGY
NEVADA OPERATIONS OFFICE
RADIOACTIVE MATERIAL SHIPPING RECORD

RAMATROL # 02008
OTHER # _____

TO: Bechtel Nevada for US DOE , AREA 5, NEVADA TEST SITE, MERCURY, NV., 89023
PHONE # (702) 295-7365
ATTN: _____
FROM: Bechtel Nevada for US DOE , Tonapaha Test Range , AREA 3 BUILDING 03-78, Tonapaha, NV. 89049
PHONE # _____

PROPER SHIPPING NAME RADIOACTIVE MATERIAL,LSA, NOS, (LSA-I)
DIVISION 7 I.D. NUMBER UN2912 GROSS WEIGHT 78 lbs NUMBER OF PKGS. 1
SUBSIDIARY HAZARD N/A

EMERGENCY TELEPHONE NUMBER (702) 295-0311
EMERGENCY RESPONSE GUIDE 162

OUTER PKG. NO.	DOT QTY	RADIONUCLIDES (Identification Number - Optional)	PHYSICAL FORM	CHEMICAL FORM	ACTIVITY ☑ Bq ☐ MBq ☐ GBq ☐ TBq	A_1	A_2	FISSILE EXCEPTED	FISSILE CONTROLLED
1.		U-238	SOLID	OXIDE	4.42E+8		X	N/A	N/A
2.		U-235	SOLID	OXIDE	7.14E+6		X	N/A	N/A
3.		U-234	SOLID	OXIDE	4.13E+7		X	N/A	N/A
4.									
5.									

Outer Container(s) Surveyed by: Mike Withers Date 09/27/02

OUTER PKG. NO.	CONTACT mS/h ☐ β·γ ☐ η	1 METER mS/h ☐ β·γ ☐ η	☐ SWIPE - DPM/100cm² ☐ Bq/100cm² ☐ β·γ ☐ α	TRANS-PORT INDEX	RADIOACTIVE TYPE LABELING (2 REQUIRED)	CERTIFICATION SPEC OR DOT# OR NRC#
1.	*		<			
2.			<			
3.			<			
4.			<			
5.			<			

Remarks or Special Handling/Transport Requirements *SEE ATTACHED SURVEY

TRANSPORT MODE HIGHWAY CARRIER GOVERNMENT TRUCK COURIERED N/A EXCLUSIVE USE YES
VEHICLE NUMBER G63 SEAL NUMBER (s) N/A
SECURITY CLASSIFICATION UNCLASSIFIED PREPARED BY STEFAN DUKE DATE 09/23/02

PLACARDS OFFERED	☑ YES or	☐ NA	initials _____
SPECIAL FORM CERTIFICATION CURRENT	☐ YES or	☑ NA	initials _____
PACKAGE CERTIFICATION CURRENT	☐ YES or	☑ NA	initials _____
RADIOACTIVE MATERIAL LICENSE CURRENT	☑ YES or	☐ NA	initials _____

Certification:
This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled, and in proper condition for transportation, according to the applicable regulations of the Department of Transportation.

CERTIFIED BY: _____ DATE 9-27-02

DISTRIBUTION: White - RAMATROL Blue - DOE/NV Pink - Traffic/Driver (2) Green - Shipper Yellow - Consignee (Via packing list)

NV - 152 (7/98) DOE/NV

DRIVER INSTRUCTIONS FOR EXCLUSIVE USE VEHICLE SHIPMENT

The Code of Federal Regulations, 173.427 required that specific instructions for maintenance of exclusive use shipment controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive use vehicles:

Do not change out the tractor before arrival at the burial site without notifying the shipper.

Do not change the fifth wheel adjustment on the tractor without notifying the shipper.

Do not move or transfer packages within or on the trailer while en route to the burial site without notifying the shipper.

The shipment must be loaded by the Consignor and unloaded by the Consignee from the transport vehicle in which originally loaded.

Shipments must be blocked/braced so as to prevent shifting of the load under conditions normally incident to transportation.

The vehicle must placarded "RADIOACTIVE" on all four sides when applicable until shipment is unloaded.

** **If the vehicle in is involved in an accident or is required to make an emergency braking action which would shift the load and change radiation levels, notify the shipper immediately.**

Any deviation from these instructions are considered violations of State and/or Federal laws and could result in carrier penalties.

Signature 9-27-02

Driver Date

Signature 9-27-02

Waste Generator Services Date

NTS On-Site HazMat Transfer - Published

Tracking No: DPL03008
Carrier: GOVERNMENT TRUCK
Vehicle: G6306852 NV
Driver: CURTIS STEVENS CDL: [redacted] NV

Depart: 23-JAN-2003 09:00 Arrival: 23-JAN-2003 12:00

From: STEFAN DUKE
BECHTEL NEVADA
BASE CAMP
MERCURY, NV 89023
Area: 05
Bldg: 5-7
Phone: 702-295-7365
Alt Phone: 702-295-4811
Pager: 702-794-6713

To: MARK KRAUSS
BECHTEL NEVADA
BASE CAMP
MERCURY, NV 89023
Area: 05
Bldg: 5-7
Phone: 702-295-6808
Alt Phone: 702-295-6811
Pager:

NAME _____
DATE 1-23-03 BECHTEL NEVADA RWP

Entered By: DUKESJ Date Modified: 22-JAN-2003

Shipped Material(s)	Package (s)	Unit(s)	UN/NA	Guide No.
WASTE	1 DRUM (S)	69.40 KILOGRAM (S) (GROSS)	2912	162
RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA), N.O.S. 7, UN-2912. RADIONUCLIDES:U-234, U-235, U-238 PHYSICAL FORM:SOLID CHEMICAL FORM:OXIDE PACKAGE ACTIVITY:4.904E8BQ CATEGORY:EXCLUSIVE USE SHIPMENT				

24-Hr Emergency Response Number
702/295-0311

Secondary Emergency Response Contact And/Or Comments
ADAM DAEGORN 702-295-4779

EMERGENCY RESPONSE

By Phone
702-295-0311

By Radio
'MAYDAY - MAYDAY - MAYDAY'

In the event of an incident involving Hazardous Material:

1. Gather HazMat shipping papers and NAER Guidebook
2. Isolate the immediate area
3. Assess the situation:
   a. Fire, Spill, or Leak?
   b. People, Property, or the Environment at risk?
4. Contact On-site Emergency Response Personnel
5. Reference On-Site HazMat Transfer Tracking Number

This is to certify that the above-named materials are properly classified, described, packaged, marked, placarded, and labeled and are in proper condition for transportation according to the applicable regulations of the U.S Department of Transportation. As a signatory I cerfify that I have been trained and tested to the requirements of 49 CFR, Part 172-700.

Authorized Signature: _____ Date: 1-23-03 Time: 0915

Received by: _____ Date: 1-23-03 Time: 0915

DRIVER INSTRUCTIONS FOR EXCLUSIVE USE VEHICLE SHIPMENT

The Code of Federal Regulations, 173.427 required that specific instructions for maintenance of exclusive use shipment controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive use vehicles:

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Do not change the fifth wheel adjustment on the tractor without notifying the shipper.

Do not move or transfer packages within or on the trailer while en route to the burial site without notifying the shipper.

The shipment must be loaded by the Consignor and unloaded by the Consignee from the transport vehicle in which originally loaded.

Shipments must be blocked/braced so as to prevent shifting of the load under conditions normally incident to transportation.

The vehicle must placarded "RADIOACTIVE" on all four sides when applicable until shipment is unloaded.

** **If the vehicle in is involved in an accident or is required to make an emergency braking action which would shift the load and change radiation levels, notify the shipper immediately.**

Any deviation from these instructions are considered violations of State and/or Federal laws and could result in carrier penalties.

Curt Steven 1/23/03

Driver Date

1-23-03

Waste Generator Services Date

DPL 03008

Low-Level Waste Certification

I certify that containers: 03L005

do not contain hazardous waste as defined in Title 40 CFR 261 or state of Nevada hazardous waste regulations:

1. According to the results of test performed in accordance with the requirements as specified in Subpart C of Title 261; and/or

2. According to the supporting documentation provided to me about the materials and processes that produced this waste.

To the best of my knowledge, I believe the information I have submitted is true, accurate, and complete.

Dennis Swick/ [signature] — 1/23/03

Generator Waste Certification Official (Print Name/Sign) — Date

Package Storage and Disposal Request

Shipment Number: **DPL03008**

Prepared By: Stefan Duke

Date: 22-Jan-2003

Manifest Number:

Package No:	03L005	Contact (mSv/h):	0.0001	Completed Date:	06-Aug-2002
Container Code:	124	1 Meter (mSv/h):	0.0001	Operation Type:	B
External Volume (m^3)	3.750E-01	Gross Weight (kg):	6.940E+01	Total Activity (bq):	4.904E+08
Waste Volume (m^3):	2.260E-01	Net Weight (kg):	3.530E+01	Activity Date:	30-Sep-2002
Comment:					

Waste Stream /Profile	Form Code	Form Description	Treatment Code	Treatment Description	Rev. No.	Revision Date	Nuclide	Qty (Bq)
LRY5LLFY00018	022		100		02	30-Sep-2002	U-234	4.130E+07
LRY5LLFY00018	022		100		02	30-Sep-2002	U-235	7.140E+06
LRY5LLFY00018	022		100		02	30-Sep-2002	U-238	4.420E+08

Reviewed By: 01/22/03

Certificate of Disposal

This is to certify that the, Waste Stream No., LRY5-LLFY00018 package number 03L005, was shipped and received at the Nevada Test Site Radioactive Waste Management Site in Area 5 for disposal as stated below.

Stefan Duke	Bechtel Nevada Waste Generator Services	Scientist
Shipped by	Organization	Title
Signature	Date	1-23-03
DOUGLAS K CLARK	RWMC	ENGINEER
Received by	Organization	Title
Signature	Date	23-JAN-2003

Bechtel Nevada

RADIATION SURVEY REPORT

Number 03RWS-5-45 Page 1 of 3

RCT(S): Shoff	SIGNATURE: Steve Shoff	DATE: 012203	
HEALTH PHYSICIST: GREENBAUM	SUPERVISOR: K A Bertuad	EVENT/ RWP NO: JS 012203 ~~03-0005-5~~ NA	PROJECT / WORK ORDER: AREA 5/RWMS

COUNTING EQUIPMENT USED IN COLUMN 1&2		COUNTING EQUIPMENT USED IN COLUMN NA		INSTRUMENT USED IN COLUMN 3 & 4	INSTRUMENT USED IN COLUMN NA	INSTRUMENT USED IN COLUMN NA
INSTRUMENT: TENNELEC	NUMBER: 7827055	INSTRUMENT: NA	NUMBER: NA	INSTRUMENT: Electra	NUMBER: 1208	INSTRUMENT USED IN COLUMN NA	INSTRUMENT USED IN COLUMN NA
ALPHA	BETA	ALPHA	BETA	COUNTING EQUIPMENT USED IN COLUMN NA	COUNTING EQUIPMENT USED IN COLUMN NA	INSTRUMENT USED IN COLUMN 5
EFFICIENCY: 32.0	EFFICIENCY: 43.3	EFFICIENCY: NA	EFFICIENCY: NA			
MDA: 13	MDA: 18	MDA: NA	MDA: NA	INSTRUMENT: NA	NUMBER: NA	INSTRUMENT: NA	NUMBER: NA	INSTRUMENT: Model 3	NUMBER: 181197
CONVERSION FACTOR: 3.13	CONVERSION FACTOR: 2.31	CONVERSION FACTOR: NA	CONVERSION FACTOR: NA	ALL READINGS MEET UNRESTRICTED RELEASE LIMITS? NA ☐ YES ☐ NO					
COUNT TIME: 1 MIN	1min	COUNT TIME: NA	1min						

PURPOSE: ~~AREA 5 RWMS WASTE SHIPMENTS~~ - 80 gal overpack from TTR for Burial - Drum # 031005

TIME	DESCRIPTION OF SURVEY	No. of Points	COLUMN 1 α☒ β☐ γ☐ OTHER	COLUMN 2 α☐ β☒ γ☐ OTHER	COLUMN 3 α☒ β☐ γ☐ OTHER	COLUMN 4 α☐ β☒ γ☐ OTHER	COLUMN 5 α☐ β☐ γ☒ OTHER
			UNIT dpm/100cm2 FIXED + REMOVE☐ SWIPE☒ N/A☐	UNIT dpm/100cm2 FIXED + REMOVE☐ SWIPE☒ N/A☐	UNIT dpm/100cm2 FIXED + REMOVE☒ SWIPE☐ N/A☐	UNIT dpm/100cm2 FIXED + REMOVE☒ SWIPE☐ N/A☐	UNIT mR/Hr FIXED + REMOVE☐ SWIPE☐ N/A☒
NA	**BACKGROUND** (Gross)	NA	0.9	3	43.7	36.7	0.05
1437	Drum # 031005	10	18	15	92.1	184	0.05
—	Last item						

COMMENTS:

FOLLOW UP REQUIRED? YES ☐ NO ☒ ALL READINGS ARE NET ABOVE BACKGROUND UNLESS NOTED

DISTRIBUTION: Original - HPD Records Center M/S 450
Copy - HPD CP6-672 File, M/S 450
Copy - Requesters Copy

BN-0108a (01/98)

WSID NO. LRY5LLFY0001 8

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Page 1 of 1

PACKAGE INVENTORY

PKG. No. 031005

PREPACKING CHECKS: BOX ☐ DRUM ☒ INTERMODAL ☐ SUPERSACK ☐

PRE USE

	YES	NO	COR
Free From External Defects (Holes, Significant Rust, Faulty Welds/Seams)	✓		
Package Empty	✓		
Devoid of Internal Free Liquids	✓		
Free From Internal Defects (Holes, Significant Rust, Faulty Welds/Seams)	✓		
Rubber Gasket/Molding	✓		
Closure Secure (Intermodal Only - No Internal Light Leakage)		N/A	
Lifting Straps			
Drum Liner (Holes, Tears, Faulty Seams)		A	

DRUM SIZE:

- ☐ 30 gal
- ☐ 55 gal
- ☒ 85 gal
- ☐ Other _____

DOT DRUM RATING: 1A2/X435/S/97

SHIPMENT PREP:

SHIPMENT No. DP103008

Activity 4.904 E8 Bq.
Gross Wt. 69.4 Kg.
Tare Wt. 34.1 Kg.
Net Wt. 35.3 Kg.

Barcodes	ON
Shipment No.	✓
Pkg. No.	✓
Gross Wt.	✓

Name S. Duke
Employee No. 183318
Date 1-22-03

PACKING UNITS B = Bag, D_1 = 30 Gallon Drum, D_2 = 55 Gallon Drum, D_3 = 85 Gallon Drum, D_4 = Other Drum, X_1 = 4' x 4' x 7' Box, X_2 = 4' x 2' x 7' Box, S = Supersack, K = Bulk, I = Intermodal Container

PACKING:

UNIT	D_2								N/A								
Lot No.	03-435																
Unit No.	00001									A							
UNIT									N/A								
Lot No.																	
Unit No.										A							

TID No. 501703 Date Applied: 1-22-03

REMARKS

Name S. Duke
Empl. No. [redacted]
Date 1-22-03

Retention Code: ENV2.d(2)

Bechtel Nevada

WASTE TRAVELER

WSID NO. L R Y 5 C C F Y C 0 0 1 5

MEF NO. F 0 2 0 1 8

LOT NO. 02 -- 425
YR EVENT CODE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Unit Type	Unit No.	Prohibited Materials Excluded	WG Name & Emp. No.	Unit Packing Date	WAC/ SPM#.	WAC/SPM Packing Date	Receiving Waste Handling Facility Date	Receiving Waste Handling Facility Name & Emp. No.	Storage Container Number/ Location	Packing Date	Packing Name & Emp. No.	Package Number	Shipping Number	Date
D2	0001	Y	R. PARKE [redacted]	8-6-02	—		N/A	—	—		S. Duke [redacted]	03L005	DRL03003	1/23/03

Package Transfer & Storage
Field to WHF Date: ________
Field to TRU Pad Date: ________

WHF to TRU Pad
Date(s) ________

TRU Pad to WHF
Date(s) ________

Units:
B = Bag
D_1 = 30 Gal. Drum
D_2 = 55 Gal. Drum
D_3 = 85 Gal. Drum
D_4 = Other Drum
X_1 = 4' x 4' x 7' Box
X_2 = 4' x 2' x 7' Box
S = Supersack
K = Bulk
I = Intermodal Container
L = Load Wrapper (Burrito)

REMARKS: Drum From CAU-425

Please refer to the instructions on page 2

Retention Code: ENV 2.d(2)

BN-0194 (02/02

Bechtel Nevada

UNIT INVENTORY LIST

WSID NO. LRY5CCFY00018
MEF NO. F020118
LOT NO. 02 -- 425
YR EVENT CODE

Unit Type	Unit No.	WG Name & Emp. No.	Date	Unit Description
D2	0001	R. PARKE [redacted]	8-6-02	Soil & small chunks of DU, wood, plastic, PPE from CAU-425

Units: B = Bag
D_1 = 30 Gal. Drum, D_2 = 55 Gal. Drum, D_3 = 85 Gal. Drum, D_4 = Other Drum,
X_1 = 4' x 2' x 7' Box, X_2 = 4' x 4' x 7' Box,
S = Supersack, K = Bulk, I = Intermodal Container, L = Load Wrapper (Burrito)
Please refer to instructions on page 2

Retention Code: Env 2.d(2)

BN-0735 (02/02)

APPENDIX E

PHOTOGRAPHS OF CLOSURE ACTIVITIES

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PHOTOGRAPH LOG

PHOTOGRAPH NUMBER	DATE	DESCRIPTION
1	07/17/2002	Overview of CAU 425 Area 9 Main Lake Construction Debris Disposal Area.
2	07/11/2002	RCT performing radiological field screening of debris prior to loading for transport and disposal.
3	07/11/2002	Removal of construction debris using a front-end loader.
4	07/17/2002	Close up of the discovery and location of the Depleted Uranium.

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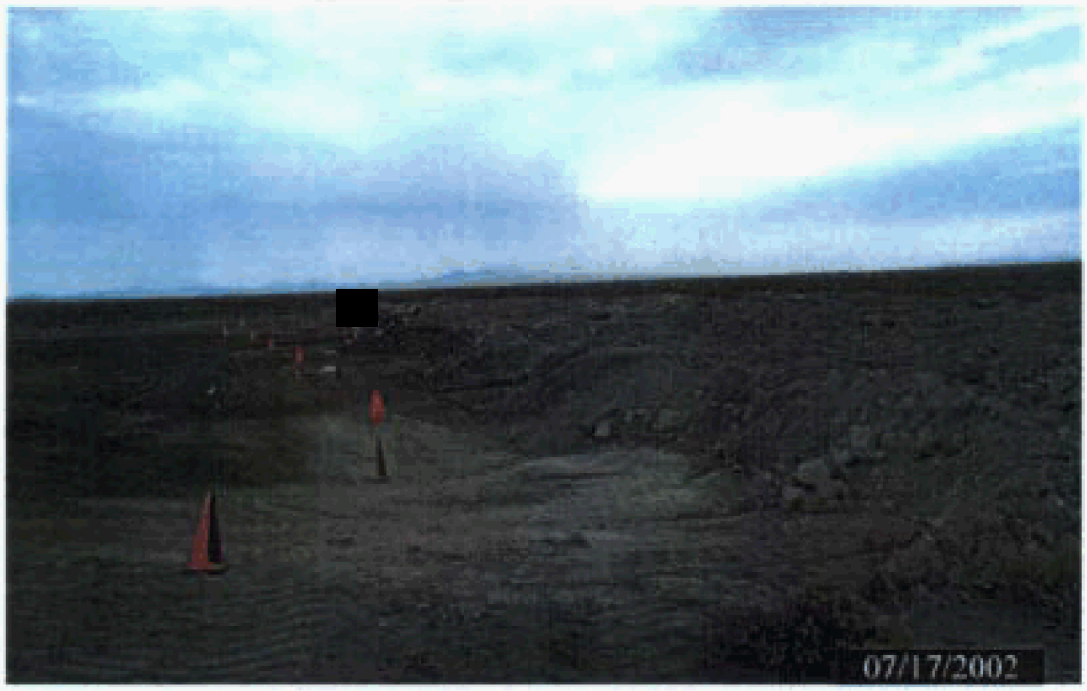

1

2

3

4

APPENDIX F

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION DOCUMENT REVIEW SHEET

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NEVADA ENVIRONMENTAL RESTORATION PROJECT
DOCUMENT REVIEW SHEET

1. Document Title/Number Closure Report for Corrective Action Unit 425: Area 9 Main Lake Construction Debris Disposal Area, Tonopah Test Range, Nevada
2. Document Date February 2003
3. Revision Number 0
4. Originator/Organization Bechtel Nevada
5. Responsible NNSA/NSO ERP Project Mgr. Janet Appenzeller-Wing
6. Date Comments Due _____
7. Review Criteria Federal Facility Agreement and Consent Order
8. Reviewer/Organization/Phone No._____
9. Reviewer's Signature _____

10. Comment Number/ Location	11. Type[a]	12. Comment	13. Comment Response	14. Accept

[a]Comment Types: M = Mandatory, S = Suggested.

10. Comment Number/ Location	11. Type[a]	12. Comment	13. Comment Response	14. Accept

[a]Comment Types: M = Mandatory, S = Suggested.

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